The Mining Journal
RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 705.—Vol. XIX.] LONDON, SATURDAY, FEBRUARY 24, 1849. [Price 6d.

Stannaries of Cornwall—In the Vice-Warden's Court.

WILLIAMS AND OTHERS *v.* EVANS.

IN RE EAST POOL MINE.

NOTICE IS HEREBY GIVEN, that, pursuant to an ORDER, or DECREE, made in this cause, and bearing date the 13th day of Feb. inst., a PUBLIC AUCTION will be HELD at WHITE'S HOTEL, POOL, on Thursday, the 8th day of March next, at Four o'clock in the afternoon, for SELLING ONE (196th) PART, or SHARE, of the said defendant, in the said mine; and the like PART, or SHARE, in the ORES, HALVANS, MACHINERY, MATERIALS, and other EFFECTS, upon and belonging to the said mine.

For further information, application may be made to the agents on the mine; or to Mr. Roberts, solicitor, Truro. 1

Dated Registrar's Office, Truro, Feb. 21, 1849.

Stannaries of Cornwall—In the Vice-Warden's Court.

PURSUANT to a DECREE of the VICE-WARDEN'S COURT, made in the CONSOLIDATED CAUSES of CRAZE and OTHERS *v.* FEGAN, the CREDITORS, in respect of WHEAL CURTIS MINE, in the parish of CROWAN, within the said Stannaries, are, on or before the 16th day of March next, to come in and PROVE their DEBTS before the Registrar of the said Court, at his office in Truro, or, in default thereof, they will be excluded the benefit of the said Decree. 2

Dated Registrar's Office, Truro, Feb. 21, 1849.

CORNWALL—TYWARNHAILE MINES.

IMPORTANT AND VALUABLE COPPER MINES TO BE LET, BY PRIVATE CONTRACT, comprising the extensive SETTS formerly KNOWN AS

UNITED HILLS, SOUTH TOWAN, WHEAL CHARLES, and WHEAL FANCY, 3

belonging to the Duchy of Cornwall, in the parish of SAINT AGNES.—These mines having been surrendered to the Duchy by the late lessees, during the extreme pressure of the latter part of the year 1847, have since been placed in good working order, and are yielding large and increasing returns. They are now to be leased, at a moderate rate of dues, for a term of 21 years.

An arrangement can be made for putting the lessees of the Tywarnhaile Mines in possession of the adjoining setts of Wheal Sparrow, West Wheal Sparrow, Basset's United Hills, Wheal Clarence, and Wheal Lydia, the property of the representatives of the late John Basset, Esq.

Proposals will be received at the Duchy of Cornwall Office, Somerset House; and any further information may be obtained by application there, or to R. Taylor, Esq., Falmouth.

Duchy of Cornwall, Somerset House, Feb. 20, 1849.

AT KIRTON TUNNEL, LINCOLNSHIRE, on the GAINSBORO' & GRIMSBY RAILWAY.
TO ENGINEERS, MILLWRIGHTS, RAILWAY CONTRACTORS, FARMERS, BUILDERS, &c.

MR. G. O. BROWN is honoured with instructions from Messrs. Stephensons, who are about completing their contract, to OFFER, for unreserved COMPETITION, BY AUCTION, at the Workshops and Premises, upon and near the KIRTON TUNNEL, on Monday and Tuesday, March 5th and 6th, 1849, the remainder of their 4

VALUABLE AND EXTENSIVE
STOCK OF RAILWAY PLANT,

which is far too large to be particularised within the limits of an advertisement, but which consists, in part, of THREE STATIONARY ENGINES—viz.:

ONE 25-horse power HIGH-PRESSURE HORIZONTAL ENGINE, fixed on a cast-iron frame, cylinder 1 foot 4½ inches diameter, stroke 3 feet, fly-wheel 12 feet, with two cylinder boilers each, 16 feet long, by 4 feet 8 inches diameter, with governors, complete, and in excellent working condition.

ONE 12-horse power HIGH-PRESSURE HORIZONTAL ENGINE, fixed on cast-iron frames, made by Mr. Isaac Dodds, cylinder 12 inches diameter, stroke 2 feet, one cylinder boiler, 17 feet 6 inches long, by 4 feet diameter, with a tube 17 feet 6 inches long, 1 foot 5½ inches diameter, fly-wheel 8 feet 5 inches diameter.

ONE 6-horse power CONDENSING ENGINE (marine construction), by Boulton and Watt, and on the expansive principle, in excellent condition, cylinder 1 foot 5½ inches diameter, stroke 1 foot 6 inches, fly-wheel 8 feet 5 inches, with new high-pressure cylinder boiler, 18 feet long by 3 feet diameter.

Also, winding and drawing gear, pumps, pump trees, pipes and pump tackle for colliery or tunnel work, including flat and round rope, skip, skip-wheels and axles, flat-rope 7 inch by 1 inch, round rope 2½ inches diameter, 1 incline rope, 400 yards long, 2 inches diameter, a large quantity of metal pulleys for inclines, millstones for grinding mortar, a great quantity of tunnel centres, and a large quantity of

MEMEL, RED FINE, LARCH, SCOTCH, AND OTHER TIMBER,

in logs and scantling, various sizes and dimensions; 5000 feet 3 inch planks and battens in lots to suit.

TWO TIMBER CARRIAGES, HARNESS for 20 horses, 2 neat dog-carts, nearly new, 1 market cart, ONE HUNDRED THOUSAND BRICKS,

3 single and 1 double horse carts, 20 three-wheeled carts, 200 navvy barrows, 20 brick barrows, brick tables, brick moulds, and bricksmakers' tools in great variety, 1 winter brick shed, 183 feet long by 35 feet wide, full of flues.

TWO HUNDRED TONS of FLAT-BOTTOMED TEMPORARY T RAILS, from 40 to 45 lbs. per lineal yard. A quantity of inch square bars, 100 to 500 2½ and 3 yard earth waggons, several hearths of blacksmiths' tools, temporary shops and sheds, workshops, workmen's cottages, engine-houses, and a variety of other materials which cannot be particularised here.

The engines will be sold on Tuesday, the second day of sale.

Kirton Tunnel is on the Gainsborough and Grimsby Railway, 11 miles from Gainsborough, and 6 miles from Brigg, Lincolnshire.

The Sale to commence each day at Ten o'clock precisely.

Masborough, Rotherham, 1849.

GLOUCESTERSHIRE.—TO CAPITALISTS DESIROUS OF SAFE AND PROFITABLE INVESTMENT.

THREE of the most extensive, valuable, and best situated COLLIERIES in her Majesty's FOREST OF DEAN,

about 800 acres in extent, which are computed to contain *six millions seven hundred and twenty-one thousand tons* of coal, of the best quality.

FOR PEREMPTORY SALE, BY AUCTION, by Messrs. GRAHAM (by order of the mortgagee), at the BELL HOTEL, GLOUCESTER, on Saturday, the 10th day of March, 1849, at Three o'clock in the afternoon, subject to conditions of sale, all those 5

HIGHLY IMPORTANT
COLLIERIES, OR COAL-FIELDS,

known as the NEW ROAD LEVEL, the FAVOURITE, and BRITANNIA COLLIERIES.

LOT I.—THE FAVOURITE AND BRITANNIA.

The FAVOURITE is galed to the Coleford High Delf Vein of Coal, and all the other veins between it and the Churchway High Delf Vein. The BRITANNIA is also galed to the Coleford High Delf Vein of Coal, and all the other veins appertaining thereto. These collieries contain about 600 acres of coal, and adjoin each other in the whole line of boundary. They are well situate, at a place called Brierly, four miles from Mitcheldean, surrounded by some of the best collieries in the Forest, and are in such an advantageous position that both (or the 600 acres of coal) may be thoroughly worked with the same establishment. The Severn and Wye Railway, leading to Bullo Pill and the port of Lidney, intersects a portion of these collieries within 20 yards of the intended pits, and joins the locomotive branches of the South Wales and Monmouth and Hereford Railways (for which Acts are obtained) a short distance to the east of them—thus rendering every facility required for the transit of coal to the principal marts in the kingdom,* and by an outlay of comparatively small amount of capital, the work may be put into full operation, yielding an average quantity of from 200 to 300 tons per day, producing a net income of at least £10,000 per annum.

*Extract of a report made upon the collieries, by J. Holdsworth, Esq., mineral surveyor, Billesdon, Leicestershire, June 29, 1839.

LOT II.—THE NEW ROAD LEVEL,

is galed to the Yard Delf, or Yorkley, Vein of Coal, and is advantageously situated at Mower's Slade, near Canhope Bridge, adjoining the Severn and Wye Railway. There is a road already driven into the coal in this work, which is recently ascertained to be the purest in the Forest, being free from sulphur, and the formation of the vein is such (having a plain rock top) as to render it workable with little expense and with less than the usual labour or difficulty. This lot will be sold, subject to an agreement, bearing date the 3d of March, 1846, to let the said colliery to Messrs. Robert and David Mushet, for 14 years, at £225 per year, and 1s. per ton for every ton of coal raised by them over and above 15 tons per day. There will be three years' rent, or £675, due at the time of sale, which the purchaser will be entitled to receive, likewise the rent in future, unless he worked the colliery agreeable thereto, and are amply responsible.

Capitalists having any intention to attend this sale, may rest assured there will be NO POSTPONEMENT.

These particulars and conditions of sale may be had at the principal inns in the adjacent towns; the place of sale; of T. Gratrex, Esq., banker, Monmouth (the mortgagee); the auctioneers, Ragland and Newport; and for a view of the Map of the Forest and the plan of the collieries, apply to John Atkinson, Esq., Coleford, H.M.'s Deputy Surveyor for the Forest of Dean; or to the proprietor, Mr. William Court, Monmouth.

OFFICE FOR PATENTS, 7, STAPLE INN, HOLBORN.

J. MURDOCH (successor and late assistant to Mr. Hebert)
Informs INVENTORS and PATENTEES, that, at his OFFICE, they can obtain REFERENCE TO A CLASSIFIED LIST OF PATENTS, 6

(THE ONLY ONE EXTANT), which shows at one view all the Patents ever granted for any particular object, whereby they may save much trouble and expense, and procure information not otherwise obtainable. BRITISH and FOREIGN PATENTS OBTAINED, and USEFUL and ORNAMENTAL DESIGNS REGISTERED.

SPECIFICATIONS carefully prepared, and REPORTS of ENROLLED SPECIFICATIONS furnished on moderate terms.

FINISHED and WORKING DRAWINGS executed with accuracy and dispatch.

VALUABLE STEAM-ENGINES, AND OTHER MINING MATERIALS, AT WHEAL RUBY AND GARLIDNA MINES, IN WENDRON.

MR. T. H. EDWARDS will SELL, BY AUCTION, on Wednesday, the 28th day of February inst., at Eleven o'clock in the forenoon precisely, at WHEAL RUBY and GARLIDNA MINES, near PORKELLIS, in the parish of WENDRON, the following VALUABLE

MINING MATERIALS AND OTHER EFFECTS—viz.:

A very excellent 70-inch DRAUGHT ENGINE, with two boilers, and every other requisite complete.
A 58-inch ENGINE, without boiler. 7
A 32-inch STAMPING ENGINE, with boiler, and 72 heads, complete.
A 36-feet WATER-WHEEL, with iron axles, lifters, &c.; a 22-feet ditto, with oak axle and ring; water stamps, with 6-heads, capstan and shears.
120 fathoms of 12-inch capstan-rope (nearly new), horse-whim and shaft tackle, punching machine, crab, and winch.
2 10-feet 14-inch plunger poles; a 14-inch H-piece, top door piece, windbore, and stuffing-box; 5 6-feet 12 and 13-inch doorpieces; 5 10-feet 12, 10, and 5-inch windbores; a 20-fathom 14-inch plunger lift, with doorpieces, &c., complete; 10 fathoms of 15-inch pumps, 10 ditto of 14-inch ditto, 20 ditto of 13-inch ditto; 20 ditto of 12-inch ditto, 10 ditto of 9-inch ditto; 14, 13, 12, 11, and 8-inch working barrels; a quantity of 12 and 8-inch rod timber.
Several pairs of faggotted rod-plates, 2-inch bucket-rods, whim and other chains, tram-road iron, saddles and waggon, a miners' dial, smiths' bellows, anvils, screw plates and taps, whim and winze kibbles, old brass, wrought and cast-iron, ladders, launders, stamps and other roofs and sheds, a quantity of timber, of various descriptions.
All the ACCOUNT-HOUSE FURNITURE, and numerous other articles.
Also, the UNEXPIRED TERM of 86 years of and in the newly-built and commodious DWELLING-HOUSE and SCHOOL BUILDING on the mine, 75 feet by 27 feet within, with an acre of land adjoining, properly fenced and improved.
The whole of the above materials are in excellent condition, and well deserving the attention of miners and others.

An early attendance is particularly requested.

Dated Feb. 12, 1849.

VALUABLE 53-inch cylinder PUMPING ENGINE, THREE BOILERS, AND OTHER USEFUL MINE MATERIALS FOR SALE.

THOMAS RICHARDS, Mine Agent and Auctioneer, Marazion, is instructed to hold a final and unreserved PUBLIC AUCTION, at WHEAL GREY, in the parish of GERMOE, on Tuesday, the 6th of March, for SELLING THE UNDER-MENTIONED

MINING MATERIALS—viz.:

1 53-inch cylinder STEAM-ENGINE, 9 feet stroke in cylinder, and 7 feet in shaft.
3 BOILERS, in excellent condition.
Capstan, shears, balance and angle bobs, horse-whims, sheds and roofs.
14 16-inch, 8 15-inch, 9 10-inch, 22 9-inch, and 9 8-inch pumps. 8
1 10-inch and 1 8-inch H-pieces and topdoors.
1 16-inch, 1 12-inch, 1 10-inch, 2 9-inch, 1 8-inch, and 1 7½-inch plunger poles, with pole cases, stuffing boxes, and glands.
All sizes of faggotted and wrought iron strapping plates.
Several clack doorpieces, working barrels, and windbores.
Smiths' tools, anvils, bellows, new and useful iron, scrap, wrought, and cast-iron.
Staples and glands, screw stocks, plates and taps.

Also, the COUNT-HOUSE FURNITURE, together with a large quantity and great variety of other materials in daily use in mines.

The Sale will commence precisely at Ten o'clock a. m.

Wheal Grey is situated within 3 miles of Porthleven, 4 miles of St. Michael's Mount, and 5 miles of Hayle.—Dated Marazion, Jan. 30, 1849.

NORTH FOWEY CONSOLS MINE, in the parish of LANLIVERY, NEAR ST. BLAZEY, CORNWALL.

IMPORTANT SALE.

TO BE SOLD, BY AUCTION (in accordance with previous announcement), on Wednesday, the 7th day of March next, to commence at Eleven o'clock in the forenoon, by Mr. J. ELLIS, Broker, the very excellent ENGINE, of 40-inch cylinder, on the above mine, nearly new, and pronounced to be a very capital machine, erected under the chief superintendence of Mr. William West; little more than two years since, on the most improved principles, and is highly recommended. Also, 9

THE MATERIALS,

Consisting of 1 boiler, 10 tons, capstan and shears, horse-whim, 60 fathoms 10-inch capstan rope, 40 fathoms 9-inch pumps, 3 fathoms 8-inch working barrels, 1 fathom 6-inch ditto, 6 fathoms 7-inch pumps, 4 clackdoor pieces, 3 windbore pieces, 12 fathoms main rods, 40 fathoms iron bucket rods, strapping plates, bolts and burs, shaft tackle, complete, whim rope and chain, 4 whim kibbles, 4 winze kibbles and ropes, 50 fathoms ladders, 80 ditto launders and stands, 150 ditto air-pipes, 36-inch smiths' bellows, anvil, vice, screwing tools, smiths' tools, miners' tools, beam, scale, and weights, leather, barrow, quantity of new and old timber, &c., together with the articles of FURNITURE, tables, chairs, stoves, &c., and all other disposable property.

For inspection, &c., apply to Capt. Mark Richards, on the mine, or at St. Blazey; and for further particulars to the purser, Mr. R. Dunn, St. Austell; or to Mr. Ellis, Falmouth, the chairman of the committee.—Dated Feb. 19, 1849.

WARWICKSHIRE.

FOR SALE, BY PRIVATE CONTRACT, a most desirable FREEHOLD ESTATE (tithe-free), with MANORIAL RIGHTS, and highly valuable STONE QUARRIES.

THE GRANGE ESTATE, 10

In the parish of BIDFORD, in the county of WARWICK, consisting of an ancient MANSION, called THE GRANGE, now divided into a FARM HOUSE, a comfortable DWELLING HOUSE, and requisite FARM BUILDINGS, YARDS, GARDENS, and several enclosures of excellent ARABLE, PASTURE, and MEADOW LAND, containing upwards of 235 acres—the whole within a ring fence, and part with valuable frontage land for building. The meadow land is highly rich and productive, and is bounded by the navigable river Avon, irrigating the land. The whole estate is in excellent cultivation, and is in the occupation of a most respectable yearly tenant, at a moderate rent. The parochial taxes are very low.

Bidford is situated in a fine healthy part of Warwickshire, between 2 and 3 miles from the market town of Alcester, about 7 from Stratford-upon-Avon, and within easy drives of Leamington, Cheltenham, and Malvern.

The parish of Bidford is celebrated for its valuable well-known stone quarries. Upon this estate three have been opened, in which are discovered several stratas of stone of various qualities, calculated for building purposes, barn and cottage flooring, staircases, chimney-pieces, lime burning, &c.

The value of these quarries is largely enhanced by their contiguity to water carriage on the River Avon—one of the quarries being within a few yards of its bank, and the two others not far distant—the stone from which might be easily and cheaply conveyed to the river by the construction of a tramroad, opening a communication, by canal conveyance, to Birmingham and Staffordshire, to which considerable quantities are now sent, and by the River Severn to Cheltenham and Bristol.

The effects, or working, of these quarries would produce a mine of wealth to a partnership or joint-stock company, or to an enterprising private individual, with a capital of about £2000 or £3000.

The working of the Bidford Stone is carried on by several individuals in the parish, but under the disadvantage of purchasing and conveying the stone from a considerable distance at a royalty rent, whereas the quarries on the Grange estate are close at hand.

This estate consists of a variety of property rarely to be met with, well deserving the attention of the capitalist for investment, of the country gentleman for a residence, or of an agriculturist for occupation.

The QUARRIES might be SOLD, or LET, independent of the estate.

For further information, apply to Messrs. Hydes and Tymbs, solicitors, 19, Foregate-street, Worcester.

VALUABLE SLATE QUARRY, in CARNARVONSHIRE.

—TO BE LET, for such term, and on such conditions, as may be agreed upon, the RIGHT of WORKING a valuable ROCK of SLATE, on the BLAENY-CWM-FRIDD, in the parish of PENMACHNE, upon which a large sum of money has been expended in driving a level, and in other works. The metal of this rock has been proved to be equal to that of the finest Festiniog Quarries, which lie in the vicinity. The undertaking would suit a joint-stock company or a private speculator, as it can now be brought into early and extensive work, at a comparatively small outlay. 11

For particulars apply to Francis Hallowes, Esq., National Provincial Bank, Dolgelly; and to view the quarries, to Mr. Humphrey Williams, Blaeny-cwm Farm, Penmachne.

COLLIERY TO BE LET, SWANSEA.—TO BE LET, for such a term of years as may be agreed upon, the COAL lying under an ESTATE of about TWO HUNDRED ACRES, within 4 miles of the port of SWANSEA. An engine has been erected, and one seam of coal has already been won. The small is suitable for general manufacturing purposes, and the large is most excellent as steam-packet coal. The pit is situate within a few yards of the Swansea Canal, to which the communication is already made.

For particulars apply to Mr. Phillip Richard, Gorse Colliery, near Swansea. 12

COAL.—TO BE SOLD, OR LET, a valuable COAL MINE, the property of Sir Thomas G. Hesketh, Bart., situate about five miles from the important manufacturing town of BLACKBURN, in the township of Great Harwood, in the county of Lancaster. The mine has been recently proved, and found, at 77 yards from the surface, to be 5 feet in thickness, and of excellent quality. It is commonly called, or known by the name of, the UPPER MOUNTAIN MINE, and extends over about 1000 statute acres, which will be divided into suitable lots. 13

A section of the borings may be seen by applying to Mr. Boosie, Rufford Hall, Ormskirk; or to Mr. Whittle, coal viewer, Charnock Richard, Chorley—to either of whom proposals may be sent.

TO CONTRACTORS, ENGINE BUILDERS, SINKERS and OTHERS.—TO LET, the SINKING a PIT, BUILDING and ERECTING a STEAM-ENGINE, FINDING PUMP, PUMPING APPARATUS, and OTHER MATERIALS, at NEWBRIDGE and TAFF VALE COLLIERY, GLAMORGANSHIRE. 14

Plans and specifications may be seen on application to the agent, at the colliery; and offers will be received till Friday, March 9th, by J. Robson, Whitwell Grange, Durham.

WANTED,—A GENTLEMAN, thoroughly conversant with mercantile affairs, to undertake the MANAGEMENT of the COMMERCIAL PART of extensive IRON-WORKS in SPAIN. He must speak Spanish, and be generally acquainted with the iron trade.—Applications, stating full particulars, to be addressed confidentially to "A. B.," at Joseph Wright's, Esq., 27, Coleman-street. 15

WANTED IMMEDIATELY, for the purpose of fixing in Glamorganshire, a SECOND-HAND STEAM-ENGINE, of 80-horse power, high-pressure, cylinder not less than 36 inches diameter, with three boilers, each 30 feet by 6 feet, suitable for winding coal and pumping water. One with a pumping beam preferred.—Offers, stating particulars, price, and locality, will be received to the 3d March, by Mr. William Hardicke, surveyor, Warminster, Wilts, to be written outside, 16

"TENDER FOR ENGINE."

WANTED,—By the PEMBROKESHIRE IRON AND COAL COMPANY,—a SECOND-HAND 35-inch CONDENSING-ENGINE, with a 70-inch blowing cylinder, 7-feet stroke, to have equilibrium conical nozzle and expansive valves, with gear complete, to be worked by an eccentric from the fly-wheel shaft, fly-wheel, shaft, carriages, and connecting-road, steam and feed-pipes, with gearing for boilers, complete, with and without boilers.—THREE BOILERS required, 30 feet long, 6-ft. shell, 3-feet tube, the same length. The whole to be 7 1-16th of an inch thick, B. B. plates; to be delivered on board ship, or at the company's works, near Saundersfoot, completely fitted for erection.—Address, Thomas Hay, Esq., Pembrokeshire Iron and Coal Company's Works, near Saundersfoot, South Wales. 17

STEAM-ENGINES FOR SALE—A BARGAIN.—A PAIR of MODERN ENGINES, of 160-horse power each, with BOILERS—all equal to new; fitted to Smith's Patent Propeller, and complete, with driving wheel, funnel, steam-pipe, gearing, &c., admirably adapted for a ship of large tonnage, or for mining purposes. Also, TWO PAIRS of MARINE BEAM ENGINES, by Fawcett and Co., of Liverpool—each engine of 65-horse power, in capital condition.—For particulars apply to Messrs. Bayley and Ridley, 3, George-yard, Lombard-street. 18

PUMP TO BE SOLD.—A PUMP, in first-rate condition, 12-inch in the bore, 4 feet stroke, with buckets, connecting-rodes, slides, and bell crank, complete. Lowest price £30.—Apply to F. Wiggin & Co., Stroud, Gloucestershire. 19

STONE QUARRY TO BE DISPOSED OF, within 20 miles of London, and 1 mile from a railway station, producing a net profit of £400 per annum. Very satisfactory reasons can be given for the present proprietor disposing of it. Any business person, who can command £700, will find this a lucrative concern—it having been established some years, and been in the present parties' hands six years. Direct "A. Z. A.," Post-office, near the Green Man, Old Kent-road. 20

RIVER FRONTAGE, SWANSEA.—TO BE LET, for such a term of years as may be agreed upon, SEVERAL ACRES OF GROUND, lying along the navigable part of the SWANSEA RIVER, in the immediate vicinity of the largest copper works, and suitable for smelting, or other manufacturing establishments. The land is close to the South Wales Railway, and possesses great facilities for delivery of coal by this line, as well as by other modes of transit. 21

Apply to Mr. B. Daniel, surveyor, No. 5, Garden-street, Swansea.

BOSTON WATER-WORKS COMPANY—CONTRACT FOR LAYING TOWN PIPES, &c.—The directors of the BOSTON WATER-WORKS COMPANY are desirous of CONTRACTING for the LAYING of the TOWN PIPES (of various sizes), about 9 miles in length, according to plans and specifications, which may be inspected at the clerk's office, in Boston, or at the office of Mr. Hawksley, engineer of the company, at his office, in Nottingham, on any day after the 28th inst.

Tenders must be sent, sealed and addressed, to the Clerk of the Boston Water-Works Company, at Boston, not later than Monday, the 12th day of March next.

The directors will require ample security for the punctual performance of the contract, and do not pledge themselves to accept the lowest tender. By order,

Boston, Feb., 1849. M. STANILAND, Clerk of the Company. 22

None but experienced workmen need apply.

GROWA SLATE COMPANY.—PERSONS desirous of becoming AGENTS for this COMPANY in the different TOWNS and SEAPORTS, are requested to apply by letter, addressed to the purser, at the offices, 57, Threadneedle-street, London, where prospectuses and every information may be obtained. 23

EAST BIRCH TOR TIN MINE.—APPLICATIONS for the FEW SHARES in this COMPANY remaining unappropriated, to be made to the secretary, 2, Winchester-buildings. 24

RUNNAFORD COOMBE MINE.—An excellent opportunity is now OFFERED to any person wishing to PURCHASE SHARES in the above valuable concern.—Mr. BROUGHTON has FOR SALE a FEW SHARES, very cheap. Apply to Mr. Broughton, 30, Taylor's-buildings, Woolwich. 25

MINING PROPERTY.—Mr. JAMES HERRON, MINE AGENT, 33, CLEMENTS-LANE, LOMBARD-STREET, has received instructions to DISPOSE of SHARES in FIRST CLASS MINES, paying regular dividends, and yielding to the purchaser from 17½ to 25 per cent. upon his outlay. He is also in a position to transact business in the following—viz.: St. John del Rey, Tamar, Treviskey and Barrier, Great Devon Consols, Aiten, Australian, Condurrow, East Wheal Rose, and Wheal Seton Mines, Great Consols Gwennap, Treviskey, Trethellan, Mary Anne, East Tamar, Tincroft, and Keswick Mining Company. 26

MINING OFFICES, THREE KING'S COURT, LOMBARD STREET, LONDON.—Messrs R. TREDINNICK & CO. beg to draw the attention of capitalists to the DEPRESSED MARKET VALUE of SHARES in ENGLISH and FOREIGN MINES, many of which pay dividends of from 20 to 30 per cent. per annum, whilst those on the eve of so doing are selling at corresponding low prices.—Messrs. T. & Co. continue to DEAL in every description of MINING, RAILWAY, BANKING, INSURANCE, CANAL, and OTHER SHARES.—Statistical information afforded gratuitously upon personal application.—MONEY ADVANCED upon the above securities. 27

MINING OFFICES, No. 8, GEORGE-YARD, LOMBARD-STREET, LONDON.—Mr. RICHARD THOMAS (who has had 20 years' experience as a mining agent in London) OFFERS his SERVICES in the PURCHASE and SALE of MINE and OTHER SHARES, on commission. Purchases in many valuable mines may now be made at unprecedently low prices. The fullest information given (without charge) relative to mining investments and operations.

N.B.—R. T. has now ON SALE a limited number of SHARES in an undertaking offering unusual advantages, situated in one of the best mining districts in Cornwall. Full particulars will be furnished on application. 28

MR. H. B. RYE, GENERAL AGENT for the DISPOSAL of MINING PROPERTIES, invites the attention of his friends and the public to the unusually FAVOURABLE TERMS on which INVESTMENTS may now be made in MINE SHARES.—Ample information (for the guidance of buyers) may be had at his offices—77, Old Broad-street. 29

MR. THOS. P. THOMAS, MINING AGENT, AND DEALER IN RAILWAY, GAS, BANK, INSURANCE, AND OTHER SHARES.

3, *GEORGE-YARD, LOMBARD-STREET, LONDON.* 30

T. P. THOMAS is a SELLER of SHARES in the leading MINES of Cornwall, Devon, and Wales—paying from 10 to 30 per cent.—Statistical information afforded upon personal application, or by letter.

MR. JAMES STRIDE, MINING AGENT, AND DEALER IN SHARES, 27, *SPRING-GARDENS, LONDON.* 31

MONEY.—MESSRS. KILLICK & CO. (late WINSTANLEY, KILLICK, & Co.), SHAREBROKERS, inform their friends and the public, they make IMMEDIATE ADVANCES, to any amount, on the deposit of English and Foreign Railway Shares, Scrip, and Debentures, upon exceedingly advantageous terms: they also BUY and SELL every description of STOCK and MINING SHARES, at much less commission than usually charged.—6, Bank Chambers, opposite Bank of England. 32

BANWEN IRON COMPANY.—Notice is hereby given, that the next HALF-YEARLY ORDINARY GENERAL MEETING of the shareholders of this company will be held at their offices, 23, Threadneedle-street, London, on Monday, February 26, instant, at Two o'clock precisely. By order,

23, Threadneedle-street, February 15, 1849. S. P. HARRIS, Secretary. 33

COPIAPO MINING COMPANY, 22, Austinfriars, Feb. 16, 1849.—Notice is hereby given, that the HALF-YEARLY MEETING of shareholders in this company will be HELD at the company's office, No. 22, Austinfriars, on Wednesday, the 28th inst., at One o'clock precisely.

By order of the directors, FRED. GRELLET, Secretary. 34

REAL DEL MONTE MINING COMPANY—A MEETING of PERSONS INTERESTED in PURCHASING and CARRYING ON the MINING WORKS at REAL DEL MONTE, will be HELD at the George and Vulture Tavern, George-yard, Lombard-street, on Tuesday, the 27th February inst., at Two o'clock precisely, for the purpose of hearing a report on the actual state of the property, and of considering the expediency of forming a new company. 35

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

THIS DAY.....Waterford, Wexford, Wicklow, and Dublin Railway—offices, at Twelve.
MONDAY.....Steam-Ship Owners' Association—offices, at One.
Whitehaven and Furness Railway—offices, at One.
Great Western and Uxbridge Railway—offices, at Three.
Caledonian Railway—offices, Edinburgh, at One.
North American Colonial Association of Ireland—offices, at One.
Londonderry and Enniskillen Railway—offices, at Twelve.
Banwen Iron Company—offices, at Two.
TUESDAY.....Real del Monte Mining Company—George and Vulture Tavern, at Two.
Exeter, Yeovil, and Dorchester Railway—London and South-Western offices, at One.
Albion Plate-Glass Company—offices, at Twelve.
British Empire Mutual Life Assurance Co.—Radley's Hotel, at One.
General Steam Navigation Company—offices, at Two.
Great Luxembourg Railway—London Tavern, at One.
Newport, Abergavenny, and Hereford Railway—London Tavern, Twelve.
Newry, Warrenport, and Rostrevor Railway—offices, at One.
County Fire Insurance Company—offices, at Twelve.
Direct London and Portsmouth Railway—London Tavern, at One.
Vale of Neath Railway—offices, at One.
Alliance British and Foreign Life Assurance Company—offices.
Charing-cross Bridge Company—offices, at Twelve.
Londonderry and Coleraine Railway—offices, at Twelve.
Droitwich Patent Salt Company—King's Head Tavern, Poultry, at Two.
Irish Waste Land Improvement Company—ditto ditto, at One.
Taw Vale Railway—London Tavern, at One.
Southampton Dock Company—offices, at One.
Llynvi Valley Railway—offices, at Two.
WEDNESDAY...Copiapo Mining Company—offices, at One.
South Wales Railway—Paddington Station, at Twelve for One.
Provident Life Assurance Co.—offices, at One.
Norfolk Estuary Company—British Hotel, Cockspur-street, at One.
Eastern Counties Railway—London Tavern, at One.
Norfolk Railway—offices, at One.
East Anglian Railways—London Tavern, at Twelve.
Newmarket Railway Company—London Tavern, at One.
English and Scottish Law Life and Loan Association—offices, at Three.
Sligo and Shannon Railway—offices, at One.
Thames Haven Railway and Dock Company—offices, at One.
THURSDAY....Clerical, Medical, and General Life Assurance Company—offices, One.
Bristol and Exeter Railway—Bristol, at Twelve.
FRIDAY.....South Australian Railway—offices, at Twelve.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*

IRISH AMELIORATION SOCIETY.

The first general meeting of shareholders was held, at the offices of the company, Waterloo-place, Pall Mall, on Tuesday, the 20th inst.

The Right Hon. Lord DE MAULEY, in the chair.

Mr. JAMES BLAKE (the secretary), read the advertisement convening the meeting, and the following report:—

The directors of the Irish Amelioration Society have great satisfaction in meeting the shareholders, and presenting to them a report of the proceedings of the board of management since the society has been in a course of formation.

The failure of many crude schemes and plans hastily adopted for the relief of the Irish peasantry, and the losses and ruin of shareholders, from their liabilities being undefined or unlimited, in several projected companies, induced your directors to proceed with the greatest caution; and though the progress of the society has, in consequence, been slow, yet they considered it their positive and paramount duty, not to advance one step that would cast any responsibility on shareholders, until they were secured from liability beyond the calls on the shares subscribed for.

The directors congratulate the shareholders that this important object is attained. A royal charter has been granted, incorporating the society, and a deed of settlement, in conformity with the charter to be approved of by the Board of Trade, is before counsel. The provisions these instruments contain clearly define the duties and powers of the society, and limit the liabilities of the shareholders.

Whilst the necessary measures for procuring the charter were in progress, your directors engaged premises in Dublin, and caused several tons of charcoal to be prepared from peat, for the purpose of making a public demonstration in London, on an extensive scale, of the extraordinary properties of peat charcoal as a deodorizer of night soil, or any other concretious feculent matter, and its great value as a manure. The demonstration was postponed until the patent rights of Mr. Rogers were secured, for it was deemed hazardous to disclose the whole of his important inventions, until they were duly specified, and his patent sealed. These are now complete, and one or more public demonstrations of the properties of peat charcoal will be made, as soon as the material arrives from Dublin. In the meantime, your directors have the gratification to announce that chemists and agriculturists of the greatest eminence are satisfied, from experiments and analysis, that the statements put forth by the society of the great value of peat charcoal are fully proved; the only further test required, is at how low a price the society can manufacture it.

Although your directors, from deep research, and most careful calculation of the actual cost of the charcoal prepared, are convinced that the profits will equal, if not exceed, the estimates stated in the prospectus, yet they are determined to adhere to their pledge—not to make any call beyond the deposit, until the actual results of a first station shall have confirmed the correctness of their opinions. To accomplish this desirable purpose, your directors are in treaty with the Grand Canal Company, in Dublin, for 30 acres of bog land, situate at Derrymullen, on the bog of Allan, 20 miles from Dublin. Here, too, the negotiation has been delayed until the charter gave the society a corporate character and powers, which being now obtained, a station will be forthwith established.

Your directors have selected this spot for the first station, from the facility of water carriage, and from its vicinity to Dublin making it easy of access to shareholders, who will be able, at little expense or loss of time, to visit the establishment, and satisfy themselves of the means and cost of preparing peat fuel and charcoal, and the profit to be derived from the undertaking.

Your directors, acting on the opinion of the members of the board of amelioration, have postponed the further meetings of that board, and its permanent establishment, until the public are satisfied, from the results of one or more stations, that the profits would justify an application to the benevolent for aid, and until the stations present objects for which the services of the amelioration board will be exclusively required.

Finally, your directors offer you their sincerest congratulations on the state and prospects of the society: they are convinced that every statement in the prospectus will be fully realised; and, in the words of a zealous and talented friend of the society, they believe that peat charcoal is destined, in time, to play an important part in our social system; and that, under judicious management, a foundation will be laid for rendering the great mass of the people of Ireland happy and contented.

On the motion of ROBERT WOLSELEY, Esq., seconded by H. RAEBURN, jun., Esq., the following gentlemen were nominated to form the court of directors, and unanimously approved:—

The Right Hon. Lord De Mauley.

Major-Gen. M'Leod	William Thomas Longbourne, Esq.
William P. Andrew, Esq.	George Gordon McPherson, Esq.
Major-General Briggs	William Pinney, Esq., M.P.
John Coningham, Esq.	Jasper Wheeler Rogers, Esq.
William Fisher Hobbs, Esq.	William Shaw, Esq.
Lieut.-Colonel P. Innes	Paul R. Shoredichè, Esq.

The business having concluded, thanks were unanimously voted to the noble chairman, on the motion of a shareholder, who bore testimony to the business-like habits and zeal of the noble lord.

Lord DE MAULEY, in returning thanks, assured the shareholders that it was his anxious wish in every way to promote the welfare of so useful an undertaking as this. True it was, that from the pressure of the times they had not made any rapid progress, but he hoped for some better results when they should have overcome those difficulties which were inseparable from the commencement of so extensive a scheme. He hoped that when a station was once established, and the produce of the work done at it was brought before the public, they would meet with general support, which, under present circumstances, they could not look for. He would do everything in his power to promote the success of an undertaking which had his best wishes. He must be permitted to add, that the directors had done all in their power to set the works going, by providing the funds necessary for their commencement.

ANTI-FRICTION WHEELS FOR RAILWAY CARRIAGES.—At a lecture recently given in the great room of the St. Martin's Subscription Library in Castle-street, by Mr. Coles, of Charing-cross, that gentleman explained, by means of models and diagrams, the principle of the invention he has patented for diminishing friction on wheels used in railway carriages, for the avoiding accidents on curves, and for the substitution of manual labour for locomotive steam-engines. He showed that the ground wheel of a carriage rolling over a smooth even surface met with comparatively little resistance, so that little friction was caused upon the external circumference, whereas the nave having a much greater rubbing surface, and having also one-half of the axletree in its grasp, became greatly heated; a most intense friction was caused, and a great destruction of the iron, which, from the particles of dust and grit coming in contact with it, was cut and ground. To remedy this, the lecturer said he had introduced two rollers or upper wheels, the surface of the circumference of which rested upon the naves of the ground wheels, and transferred the rubbing surface to them. He exemplified this by a model, which when the upper rollers were used, was moved on a level surface by a weight of 14 ozs. by means of a pulley, but which, when the upper rollers were not used, required a weight of 60 ozs. He then showed, by another model, that his principle could be much further carried out by employing another set of upper rollers, and by that means transferring the friction, and extending it over larger surfaces, and that the employment of four men working with windlasses would be sufficient so propel a railway carriage or carriages. The models for avoiding dangers on curves showed the advantages of two-wheeled carriages, and the necessity of keeping the axles level with the horizon, and pointing towards the centre of the curve. The lecture excited considerable interest, and the principle it developed is worthy the attention of engineers and the public.—*Times.*

A PERFECT CURE OF DROPSY BY HOLLOWAY'S PILLS.—Mrs. Lambert, of Swan-street, Newcastle, had enjoyed the best of health until the meridian of life; at that critical period she was attacked with dropsy, attended by a very troublesome cough. The medical aid of several eminent practitioners was procured, but their efforts failed to remove or even abate the rigour of the disease. The water in her body and legs increased so rapidly, that fears were entertained that she could not long survive. At this crisis she commenced taking Holloway's pills, which acted so powerfully on the complaint, that its progress was immediately arrested, and in the course of two months the cure was complete. Sold by all druggists, and at Professor Holloway's establishment, 244, Strand.

Transactions of Scientific Bodies.

MEETINGS DURING THE ENSUING WEEK.

THIS DAY.....Royal Botanic—Inner Circle, Regent's Park ..... 3½ P.M.
MONDAY.....Geographical—8, Waterloo-place ..... 8½ P.M.
Medical—Bolt-court, Fleet-street ..... 8 P.M.
TUESDAY.....Medical and Chirurgical—53, Berners-street ..... 8½ P.M.
Civil Engineers—25, Great George-street ..... 8 P.M.
Zoological—11, Hanover-square ..... 9 P.M.
WEDNESDAY.....Ethnological—17, Saville-row ..... 8 P.M.
THURSDAY.....Royal—Somerset-house ..... 8½ P.M.
Antiquaries—Somerset-house ..... 8 P.M.
FRIDAY.....Royal Institution—Albemarle-street ..... 3½ P.M.
Botanical—20, Bedford-street, Covent-garden ..... 8 P.M.
SATURDAY.....Asiatic—5, New Burlington-street ..... 2 P.M.
Westminster Medical—17, Saville-row ..... 8 P.M.

INSTITUTION OF CIVIL ENGINEERS.

FEBRUARY 20.—JOSHUA FIELD, Esq. (President), in the chair.

The paper read was "On the Explosion of Fire-damp which occurred in the Eaglesbush or Eskyn Colliery, Neath, South Wales, on the 29th of March, 1848," by Mr. Joshua Richardson, M. Inst. C.E.

This paper first detailed the frequency of these occurrences in some parts of South Wales, and more particularly in this colliery, where the tender and friable nature of the coal peculiarly induced in the working, or excavation, the formation of fire-damp and explosive gas. This had been shown experimentally by Sir Humphrey Davy, when, on breaking up large coal under water, he collected a quantity of fire-damp at the surface.

It then gave a description of the colliery workings; the state of the mine before the explosion occurred; the condition in which it was found at the time of the inspection, a fortnight after the accident; the probable causes of the catastrophe, and the best known means of preventing a recurrence of such events. The seam of coal was described as being about 4 feet in thickness, of a highly bituminous and friable nature, and worked by an inclined adit or entrance, with a main gallery, whence the stalls were worked on either side—horses being employed to draw out the coal in trams, which were conveyed direct to the vessels in which it was shipped for exportation, to the extent of 30,000 tons annually. The ventilation was effected by a down-cast and an up-cast shaft, between which an air course was arranged, so as to extend throughout the active workings, with a chimney at the exit, through which the air should have been expedited by a furnace, which, however, had been rarely lighted; and the air course, which was 1 mile and 5 furlongs in length, was in places of unequal and inadequate areas, so that, in certain states of the external atmosphere, the air in the mine became very sluggish, and even at times oscillated to and fro, instead of regularly travelling onwards in an uninterrupted current. This was so much the case, that the colliers employed fans to drive the gas from them into the proper channels. Great negligence appeared to have existed, both in the general system of working, and in the use of the Davy lamps, which were frequently used without the wire gauze guards. The usual state of the mine could not be judged of by an inspection *after* the accident, as all the falls and incumberances had been removed, the destroyed doors and stoppings had been well replaced, and general precautions had been adopted, which evidently had not previously existed; but there still remained evidences of want of precautionary measures. Candles and open lamps had been constantly used, although the general fiery character of the mine was notorious; and, after the explosion, two Davy lamps were found, without their wire-gauze guards.

The temperature in various parts of the mine was so near that of the external atmosphere, that it was evident spontaneous ventilation could not have proceeded regularly; and it was shown, that the slightest change of the density of the air, even from the sun breaking out, would have sufficed to render stagnant the whole system of ventilation; especially as the furnace, which should have accelerated the current by exhaustion, had been allowed to fall into a ruinous condition, and had seldom been used, and the velocity of the current had rarely exceeded 5 feet per second, which was totally inadequate to supply the requisite quantity of air for such an extent of workings. The cause of the accident was, therefore, very apparent, and might be attributed to a want of a general good system of ventilation, permitting accumulations of gas and fire-damp, and the careless use of open lights, or unserviceable Davy lamps; and the consequence of this was the sudden death of 20 men, and several horses, with great injury to the mine. The means of prevention were, evidently, a complete revision of the system of ventilation—the enlarging of the air course, to uniform and adequate dimensions—the proper division of the air into several columns—the construction of proper doors and stoppings in convenient positions—strict regulations for the use of Davy lamps, or other means of lighting, and better general superintendence, by educated men, who would enforce precautionary measures. Due credit was given to the proprietors for their anxiety to afford every means of inspection, and for adopting all suggestions calculated to prevent the recurrence of such an event; and it was stated that they had since erected one of Mr. Price Struvé's ventilating apparatus, of the working of which an account was promised in a future communication. In the discussion which ensued, the various systems of working and of ventilation, in all parts of England, were noticed; and it was shown that, in general, every means was adopted to prevent accidents; but that, up to the present time, the mines in the west were not as well managed as those in the north, or the midland district. Every day, however, introduced better measures and better men, of education, for carrying into effect the most approved systems, and that, as the mines became more extensively worked, so these accidents would, and did, become less frequent.

The paper announced to be read at the meeting of Tuesday, Feb. 27, was "On Fire-proof Buildings," by Mr. J. Braidwood, Assoc. Inst. C.E.

INSTITUTION OF CIVIL ENGINEERS IN IRELAND.

At the meeting of the Institution, on Tuesday week, Mr. W. Purdon, civil engineer, read an interesting account of the Woodhead tunnel on the line of railway between Manchester and Sheffield.

The situation and character of this extraordinary work was described by Mr. Purdon, who acted as resident engineer throughout its construction, and was thus enabled to give accurate plans and diagrams for the illustration of the paper. An enlarged section of the ridge of mountain that was pierced showed at a glance the nature of the structure, and how the design and lines of the work stood related to its geology and physical character. The highest point of the ridge is 1552 feet over the sea, and 620 feet above the tunnel formation. The length of the tunnel is 3 miles and 15 yards, and there is 79 feet difference of level between one end and the other, with a uniform inclination of 1 foot in 200 between these limits. In consequence of the great depth from the surface to the level of the tunnel, it was calculated that but little time in proportion to the expense would be gained by sinking many shafts in addition to opening each entrance face, so that but five shafts were sunk. The average depth of the shafts is 515 feet. They were sunk at 16 feet to one side of the range of tunnel, and so disposed over its length as to bring all the faces of operation to a termination at one period of time.

The setting out of the line of the shafts, and transferring the range and levels into the interior of the hill, was a practical performance of some nicety and consequence, which was detailed with circumstantial minuteness; after which the paper proceeded with an account of the preliminary operations and various opinions regarding the mode of construction that should be employed. Two driftways, 6 ft. square, were driven, one at the bottom of the tunnel, and the other at the crown, throughout the entire length, which was attended with some advantages. The diameter of the shafts were 10 ft., and a 25-horse steam-engine was applied at the top of each to work the pumps, and wind out the excavated material. The ventilation of the works was provided for by an ingenious application of two furnaces to rarify the air in the upper driftway, and permit an escape by the flue of a chimney, whilst fresh air was drawn in by the bottom driftway to supply its place; and in some stretches of the tunnel, air was blown in by a fan-wheel, driven with great speed by the engine, and communicated by means of square wooden pipes. The drainage of the works was effected by cast-iron pumps of nine inches bore, and divided into three lifts at each shaft, the manner of working which was illustrated. The lifting out such a quantity of water as was met from so great a depth engaged the principal power of the engines. The details of the arrangement of the pumping apparatus were fully explained.

The process of sinking the shafts, and the manner of lining them with masonry and timber, were then gone into, after which a description of the winding gear for drawing up the excavated material was given. The time occupied in sinking the various shafts varied. They were all commenced at the end of 1839, and the three that were situated more easterly were got down in little over two years. The two western shafts were attended with less success, in consequence of the difficulties encountered from an extraordinary quantity of water that was met at a great depth, and accounted for by the geological formations, as it afterwards appeared; they occupied about four years in sinking. When the power of the engine was insufficient to pump out the water, resort was had to coffering the shaft through some heavily watered beds of strata, that had impervious layers at top and bottom, by which means the lifting it out by the pumps was obviated. The various difficulties and ordinary casualties that arose in the course of the sinking, under the circumstances, required prompt and well-considered efforts to meet them on every occasion, or defeat would have resulted. Putting aside certain exceptional delays, the rate of sinking was two yards a week. The quantity of water drawn out of the shafts whilst they were in progress of sinking was 2,388,246 tons weight, and after they were sunk to the bottom, the quantity of water drawn up was 3,374,511 tons weight; the total quantity was 5,762,757 tons, which would fill a cubical cistern of 197 yards square. It was estimated that this immense quantity of water was lifted through a vertical space of 350 ft., a work equal to the labour of 58 horses for 4½ years. The water that was continually passing away at the lower end out of the tunnel, after it was completed, was by means of two open side drains, 12 in. wide, and 5 in. deep, with a velocity of 3·40 ft. per second, which indicated a discharge of 1064 gallons per minute.

CALIFORNIA.

The information received during the week of the proceedings relative to the gold district, though not greatly important, is interesting. Among the confirmatory letters which are daily arriving from various quarters, is one from Brigadier-General P. F. Smith, published in the *Washington Union*, dated Panama, January 7, stating that the captain of the French brig of war, *Genie*, informed him that $ 1,800,000 in gold had been brought to Valparaiso and Lima to be run into bars, and that the British Consul at Panama had forwarded 15,000 ounces across the isthmus. He further states, that emigrants from the United States will be anticipated by eight or ten months in their arrivals in California, by a rush of all the moveable population on the west coast of South America. Up to the 19th December last, it was stated that 1700 persons had sailed from Valparaiso, and 400 more were waiting for ships. According to another official letter, gold was selling at Monterey for $ 11 per ounce, at San Francisco, $ 10, and at the mines, $ 6, or about one-third of its value in the United States. The Indians were still without much idea of its relative value, and would part with large quantities for any trifle which took their fancy. Among the extracts from private letters are the following—"I saw where one man took, within six days, from a space of ground not bigger than the old distributing table in your post-office, $ 65,000. This man said he was satisfied, and let the place be known to a friend, who took out $ 5000, and he, in turn, gave it up to an acquaintance, from whom I have not heard. I have been one week at the mines, and without any great effort brought away 4 lbs. troy, over $ 800. I left on account of the frequent occurrence of the bilious fever, occasioned by the water getting low and bad to drink. This is the close of seven months perfectly dry; not one drop of rain until the day before yesterday, and a little yesterday." Another writer says—"You may think the accounts of the gold discoveries exaggerated, but I can assure you they are not. The following fact I hesitate to tell you, because it seems incredible, but it is nevertheless a fact. A friend of the French consul—and the consul has reported the same to his Government—went out some days since to the gold region. He dug four days, during which time he got 40 lbs. of gold! There are plenty of lumps found, weighing from 1 lb. to 2 lbs. each, and it is said that there is a piece in San Francisco weighing 25 lbs.—indeed, an acquaintance assured me that he held it in his hand. It will evidently be impossible to prevent the troops, when they arrive, from deserting, and there will be no force to control the crowd of adventurers that will arrive." And another dated Monterey, Nov. 1, states—"We arrived here on the 9th last month. The weather, for the last fortnight, has been delightful, very much like our finest October weather at home. The pleasant season has just commenced. It will be impossible for persons at a distance to realise the state of affairs here. Gold is the only subject discussed. It is bought and sold in grocers' scales. The price of a glass of grog is a pinch of gold. The Indians had, at first, no idea of its relative value. They would offer all they had for anything that pleased them. A man from the mines told me that he sold a blanket for $280 in gold, and the hat that he wore up there—an indifferent one—for $64. Every one that can possibly do so has gone to the mines. There are some 15 or 20 vessels at San Francisco, which cannot leave, because their crews have deserted. They offer $50 a month, and cannot get men at that. The usual wages were about $12. Those who reap most in this golden harvest are the small traders; for, as a matter of course, the necessaries of life are scarce. One of these men informed me, that he retailed flour at $2 a pound, and said it had been four. He also sold sugar at $2 per pound, and brandy at $12 a bottle. Crow-bars, pickaxes, &c., sold at first for an enormous price. The mine is now known to be 400 miles long, and 100 broad. It is thought to be much longer, but it has not been explored further. A man, without much exertion, can make $1000 a month (250*l.* English). Some have made it in a few days. I saw a party that had been in the mines about two months; each one person averaged about $1500 per month; the largest piece that I have seen weighed 1 lb. 2 ozs. The most that is found is small and fine. A man will leave a place at which he does not find more than an ounce a day. The machines are very rude—in fact, it would be profitable to work that which escaped them, were there not richer work all around. There are about 10,000 persons working. People are flocking all around. The mines are said to be inexhaustible. Doctors are making fortunes fast; their fee at the mines for feeling the pulse is an ounce of gold. It is said that some of them are making $100 a day. It is very sickly now at the mines."

The advices from the Sandwich Islands also continue to harmonise with those from other quarters. Several persons, it is averred, had already returned to Honolulu with very large sums, and such was the excitement caused by their statements, that not less than 20 vessels, and about 400 passengers, had left the islands, and every available ship was still being pressed into the service.

A good deal of excitement had been caused in New York, by a statement that some gold assayers had about 20 ozs. sent for analyses, which proved to be only sulphuret of iron; it was not affected by acids, but evaporated in the crucible. It is, however, explained that 2 tons of this mineral was brought to New York two years since, and was now attempted to be put into circulation. The *Crescent City* steamer had returned to New York, after her voyage to Chagres, where she left 450 persons waiting to cross the isthmus; much sickness and several deaths had occurred, and the accounts of the route are wretched in the extreme. The great demand for tonnage had raised the rate of freights, and nearly 100 vessels had sailed for San Francisco, with about 4000 passengers on board. Two steamers cleared out with 300 passengers, and numerous parties were forming to go across the mountains; one company of 500 had left by the overland route, and others were nearly ready.

Amidst all this exciting information, some doubt exists as to the extent of the gatherings, from the fact of so little having yet found its way to the United States—the quantity as yet received at the Mint being only about 120,000*l.*; the speculations on the extent of the findings are at present but conjecture, and time only can prove the correctness of the various statements as to the length and breadth of this gold field. The departure from New York of the surveyors and engineers, with their respective staffs, for Chagres, to commence the railroad across the Isthmus of Panama, had created a lively interest, which, however, was somewhat damped by the adoption of a resolution by the Senate, directing a survey to ascertain the best route for a railway from the Mississippi to San Francisco; should this be carried out, it threatens great danger to European traffic with the settlements in the Pacific, as it would open at once a channel for the produce of the United States, and leave our trade still to be carried on by Cape Horn. England must secure a right of way by this nearer route to the Pacific, or it will be impossible she can secure her fair share of the rapidly extending trade in that quarter.

It is stated, in a New York paper, that foreign ships are prevented from carrying goods from the United States' ports for California, but must clear out coastwise, and that several Swedish, Danish, and British vessels have been obliged to discharge their partly-loaded cargoes in consequence. In the House of Representatives, Mr. Hunt, the chairman of the Committee of Commerce, had brought in a bill to extend the United States' revenue laws over Upper California; and it was urged that immediate action was necessary, as goods from all parts of the world would be exposed for sale, which had paid no duty, in competition with United States' goods which had paid. The bill, however, only provides for a collector, at a salary of $ 3000, and three deputies at $ 1600, per annum, and it is not probable their services would be long retained. It is proposed to form two new states—one to be called California, and the other New Mexico; the former would be 380 miles long, and would contain 150,000 square miles, of which about one-fourth is habitable. Another account says—"Up to the close of January, 5719 individuals had taken the route to the new El Dorado, in 99 vessels, hundreds were being added to the number, and whole fleets of ships were announced for departure. A large amount of specie in silver had also been shipped for California, to the amount of $ 500,000. $ 60,000 value had been received thence." The latest dates from Chagres and Panama are to the 8th and 9th ult. inclusive. They were discouraging touching that route to the New World. A private letter, received in New Orleans, states that $ 2,000,000 in gold dust was at San Francisco, awaiting transit to the United States. A Mazatlan letter, of the 20th of December, reports that the washings had ceased, the whole region being covered a foot deep with snow. Gold had been discovered 100 miles south of the original field.

California appears to be not the only portion of the American continent producing the precious metal. New gold mines, of immense value, have been discovered in Virginia, and at Whitehall Mine, belonging to Messrs. Stockton, Heiss, and Co., 35 lbs. of gold were collected by three negroes in five days, and one day's working of the three negroes aforesaid is said to have produced $1594. And this brings us to an important document transmitted by the director of

the Philadelphia (United States) Mint to Congress, showing the product of the domestic gold mines in the old states:—

PRODUCT OF MINES

Mines.	In 1848.		Total Deposits.
Virginia	$57,886	since 1829	$1,003,180
North Carolina	106,034	since 1824	3,995,470
South Carolina	19,228	since 1829	409,094
Georgia	3,370	since 1830	2,336,616
Tennessee	3,497	since 1831	32,399
Alabama	3,670	since 1829	49,163
New Mexico	682		682
California	44,177		44,177
Various sources	—		34,237
Total	$241,554		$7,991,685

One-sixth part of the deposits in 1848 was of the new California mines. In twenty years the whole product has averaged about $400,000 per annum.

IMPROVED MEANS OF COMMUNICATION.

THE IMPORTANCE AND ADVANTAGES OF ADOPTING TIMBER TRACK-ROADS ON COAL-FIELDS AND MINERAL DISTRICTS, ESPECIALLY THROUGH OR ALONG MARSHY OR PEAT GROUND, BOTH AT HOME AND IN THE COLONIES, ESPECIALLY IN THE MINERAL DISTRICTS OF SOUTH AUSTRALIA. BY THOMAS MOTLEY, C.E.

When it is considered what an important item the carriage of coal, or mineral ores, forms, as compared with its bulk or value, it is obviously of great importance to adopt the most rigid economy in the means of transit. It appears that the carriage of the mineral ores in South Australia, by means of cattle, on bad roads, forms a very large drawback of a very serious amount; now, as the surface of the country to the various mineral districts has represented to be generally level, over marshy or low land, it must be peculiarly favourable for the construction of timber trackroads; by which means I apprehend the produce of the several mines might be conveyed at from one-sixth to one-eighth of the present cost—thus saving from 500 to 600 per cent.

Telford and Sir Henry Parnel, in their Report upon Turnpike-roads, many years ago, stated, that if a good track was made on the side of a road, with the same undulation, that then one horse would do as much as five or six could on a Macadamised road. It has, however, been subsequently satisfactorily proved, that one horse on a railway, or tramroad, is fully equal to from 8 to 10 working on an ordinary turnpike-road. It is, therefore, surprising, that more attention has not been devoted to the subject, but which may, in a measure, be accounted for, by considering the intoxicating excitement occasioned by the extraordinary feats of high speed, thereby sacrificing the economy of money to the economy of time, which is, perhaps, not of vital importance to more than 1 in 10 who travel—thus sacrificing economy to nine for the benefit of one. The public generally are not aware of the great sacrifice necessarily occasioned by conveying ponderous loads at high speed: the speed of 30 or 40 miles per hour requires the upper works of the road, the weight and strength of the engines and carriages, together with the working expenses, to be about one-third more than would be required if the rational speed of 15 to 20 miles per hour were adopted; thus it may be affirmed, especially on broad gauge lines, that one million out of every three millions has been sacrificed principally for the sake of high speed. This is most amply confirmed by the Belgian railways, which have cost, on an average, less than one-third of the average cost of the English railways—hence, by adopting the speed of 20 miles per hour, they are enabled to convey the traffic at about one-half the charges, and *yet afford a reasonable profit*. Time and circumstances seems, however, at last, to have awakened railway directors and shareholders to the necessity of economy, and they have learnt, by sad experience, the folly of constructing branch railways upon the costly system of the trunk lines.

I will now proceed to show that branch lines, and roads through agricultural or mineral districts, may be constructed economically, affording at the same time a large reduction in charges, and a greater public convenience and accommodation. The plan I propose is, to construct on the sides of public roads, or on roads made for the special purpose, two timber tracks—say, from 18 to 24 inches wide—at a proper distance to suit the wheels of the carriage, on which to spike or screw down a strip of hard wood, 3 to 4 inches wide, and about 2 inches thick, so as to prevent the wheels running off the tracks: this precaution is very needful when passing over marshy or meadow land, because, if the wheels run off, much inconvenience would probably be occasioned.

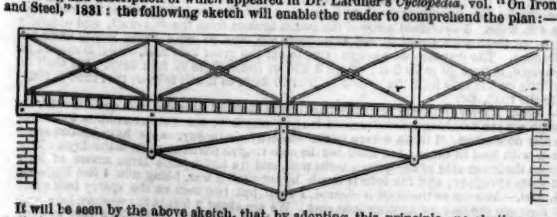
If the bearers were made of beach, or other hard wood, in many cases iron might be dispensed with, and thus a large expense would be avoided, for if the tire of the wheels are smooth, the surface of the timber would endure as long as it remained sound; if, however, it be deemed needful, or consistent with economy, to adopt an iron surface, for the wheels to run upon, then flat iron, 2 to 3 inches wide, ¼ to ⅜-inch thick, might be screwed on the bearer (or strips of hard wood might be advantageously adopted in lieu of iron, which could be easily and cheaply renewed); or, if it was deemed better to adopt wheels with flanges, similar to those used on railways, then the flat bar of iron might be fastened on the top of the timber guide rail; but I prefer the wheels to run on the lower surface, because such wheels are adapted to run on common roads, which, in some cases, would be advantageous: the tires of the wheels may be slightly convex, so as to reduce the point of bearing, and thereby reduce friction.

I will now proceed to describe the form of the bearers, and plan of constructing the tracks. About 10 years ago, I submitted to the British Association, at Newcastle-upon-Tyne, among other things, a plan for angular cast-iron chairs, or cradles, for supporting longitudinal timber; and, at the same period, also triangular longitudinal timber bearers. I am not aware that the plan has yet been adopted, excepting its adoption in the cross-bearers on the South-Eastern line, by W. Cubit, Esq., who informs me that he considers that form very superior to the ordinary flat-cross sleepers.

There are two good reasons, I think, for preferring the angular form to that of the parallelogram—first, it is about one-third stiffer, consequently makes a longer bearing; secondly, it is packed with greater ease and certainty, with half the labour, and does not require the balasting to be disturbed; whereas the parellogram form requires the removal of the balasting on both sides, and the packing is horizontal, consequently more difficult and uncertain to accomplish; in the other case, you have only to raise the triangular bearer, by mechanical means, to its proper height, and then easily, expeditiously, and perfectly to pack it.

I consider bearers containing 1½ feet of timber in each yard run, of sufficient substance to sustain loads of from 4 to 5 tons on 4 wheels, and, therefore, a 12-in. square log, cut diagonally, will make two bearers, with an 18 inch surface, 9 inch deep in the middle. These bearers may be 15 to 18 feet long, and halved on each other at the ends, and supported on what may be termed cradles, made of flat timber, 2 to 3 inches thick, and from 9 to 12 inches wide, and of sufficient length to allow angular blocks at each end, on which the ends of the bearers to rest, the halved ends to be secured together by screws or bolts, but not to be fixed to the chair or cradle, so that the bearer may be raised, when needful, without disturbing the cross bearer or chair; and the guide timber should be fixed so as to cross the ends of the bearers, thus connecting them, and, in a degree, constituting one continuous bearing throughout the whole length of the road. Where the surface of the ground is of a firm compact nature, all that would be needful on laying the timber will be, at every 15 or 18 feet, to dig a cross trench, sufficiently deep and wide in which to insert the cross bearer or cradle, and then to dig a triangular trench, to receive the longitudinal bearer, which may then be packed to the required level; or it may be worth while to incur the expense of digging a trench for the bearers—say, 12 inches deep and 2 feet wide, putting therein a sufficient quantity of prepared concrete and sand, or fine gravel, to form a bed for the bearer: this would, undoubtedly, make a very firm and substantial road, at a comparatively small expense. With respect to the cost of such tracks or roads, I estimate that 3½ cubic feet of timber would be ample for every yard run; and as there would be but very little labour, either in the framing the timber or in laying it down, there is not much difficulty in forming an estimate of the probable cost. Assuming the timber at 1s. 6d. per foot, and allowing 1s. per foot for framing, fixing, and balasting, and say 3d. for extras, this would make 2s. 9d. per foot, or about 8s. 6d. per yard run; so that the probable cost of such tracks may be safely estimated at from 700*l.* to 1000*l.* per mile, depending, of course, on the substance of the timber employed.* This, I apprehend, will be about one-half the cost of a substantial cast-iron tramway, or about one-third the cost of an ordinary railway—100 per cent. cheaper than the former, and 200 per cent, than the latter—and certainly very superior to a cast-iron tramway, which being constructed in short lengths, and spiked down on cross sleepers, are very apt to become loose, and the sleepers are liable to sink unequally, and thereby cause a complete series of undulations, which is, of course, very prejudicial. I have seen tramways where, owing to the latter cause, one horse could only draw from 2 to 3 times more than on a turnpike-road; whereas, on the track I propose, one horse would do as much, at least, as six would do on the road: now, as this may be affirmed as an undisputed fact, the importance of such roads, or tracks, cannot be doubted, especially along extensive level, marshy, and peat lands, both at home and in the colonies. With respect to the latter, I cannot but think it would be a wise step for Government, previous to disposing of land in the colonies, to construct such a road, or track, as nearly as possible, through the middle of each large district or allotment, being persuaded that the increased value of the land on each side would most amply repay the outlay, and greatly facilitate the settlements—contributing largely to the happiness, comfort, and security of the emigrants. The same will also apply to Ireland, where there are large and extensive rich marsh and peat lands, comparatively of little value, for want of good roads, which the plan proposed would, in a great measure, remedy; and, therefore, I think, it would be an almost incalculable advantage, if the owners of such tracts of land would adopt the system, and, if need be, for Government to advance loans to enable them to do so, which would, probably, double or treble the value of such land.

As bridges form an important item in the construction of railways, it is essential that a due consideration be devoted to that subject. The most economical kind of bridges are those constructed upon the principle of under-suspension, and is applicable for crossing all streams, brooks, or rivers not navigable—a plan of which I published many years ago, a drawing and description of which appeared in Dr. Lardner's *Cyclopedia*, vol. "On Iron and Steel," 1831: the following sketch will enable the reader to comprehend the plan:—



It will be seen by the above sketch, that, by adopting this principle, no abuting property is required in or at the points of support, so that such kind of bridges may rest on a solid bank, with only a plank of timber, or slabs of stone, to rest upon, which may be made perfectly secure, if piles are driven for the plank or stones to rest upon. This is a very important consideration in marshy or peat lands, or where the construction of abutments would be expensive. The depth of the suspending bars I should recommend to be about one-eighth of its length: thus, suppose the above sketch to represent a bridge 40 feet long, the depth of the centre post would be 5 feet, and the others 2 feet 6 inches; the leverage of this proportion is as 4 to 1—that is, that the effect of a load at the middle will occasion a strain equal to four times, or twice the load, at each end; but, if the same load is laid uniformly along the floor, then the strain will only be equal to double the load—this is independent of the strain occasioned by its own weight.

To construct a bridge of this kind, the following proportions of timber and iron will be amply sufficient, supposing it be 40 ft. long, and 12 ft. wide—the beam to be composed of two planks of timber 12 in. deep, and 3 in. thick, notched into the upright supporters; these supporters to be (say) 9 in. by 6 in.; the joists to be (say) 12 in. by 3 in., and 13 ft. long, so as to allow being knotched on the double beam—say 1½ in. deep, with a corresponding knotch made in the beams; the joists would then become cramps, or stays, to prevent the beam from buckling, and, by putting a joist in every foot, 3-in. planking would be sufficiently thick, and, when laid, would render diagonal stays to the bridge unnecessary—the supporters to be continued up, so as to constitute the support to the fencing; the lower end of the supporters to be notched, or morticed, so as to allow the suspending bars to pass to the centre supporter, and there to be united by means of a strong short bolt, and in like manner to secure the bars to each of the shorter supporters; the two diagonal bars to be united to the middle supporter, immediately under the beam by a similar bolt; by this means any defective bar may be replaced with but little trouble or inconvenience. A main bolt, of about 2 in. diameter, should be passed through the middle of the beam and supporters, so as to connect both beams of the bridge, and another such bolt to be inserted just above the junction of the main suspending bars: these suspending bars to be of (say) 2 in. by 1 in., or round iron, containing a like section; two of these side by side, but only one for the diagonal. The section of the eight main suspending bars would be 16 in., the strength of which united, if good iron and sound work, would bear a vertical strain of about 400 tons; but as the leverage of the bridge is four times, therefore a load of 50 tons, fixed at a point at the middle of the bridge, would cause a strain of 200 tons, which would cause the iron to begin to stretch; if the load is uniformly laid the whole length, then the strain would be 50 tons on each end.

The weight of iron needful for such a bridge would not exceed 25 cwts.; and as the iron may be obtained in Wales at less than 14*l.* per ton, manufactured and prepared for fixing together, the cost would be under 20*l.*—the excess being only the cost of freight and hauling. The quantity of timber would be under 250 cubic feet, which, at 1s. 6d. per foot, would not exceed 20*l.*; and assuming the cost of preparing and fitting to be 1s. per foot, this would make the whole cost about 50*l.* or 55*l.*—so that a bridge of this kind and dimensions, capable of sustaining, with most ample and perfect security, a uniform load of 50 tons, may be constructed for about 30s. per foot run, independant of the supports or abutments. This I apprehend is very much below the cost of a bridge composed entirely of timber, besides the iron being much more durable. Light foot or carriage bridges upon this principle may be constructed at from 12s. to 20s. per foot, from 20 to 30 ft. long, 6 to 8 ft. wide. The principle may be applied to bridges of every span, in situations where headway is not required—thus, bridges of from 80 to 100 feet span, 14 to 18 feet wide, might be constructed at from 40s. to 50s. per foot run, capable of sustaining, with perfect safety, uniform loads of from 50 to 60 tons; and, as the peculiar nature of the principle does not require expensive piers or supports, I apprehend, for all ordinary situations, timber piers or supports may be made sufficiently strong, of an average height of 30 feet, at from 80*l.* to 100*l.* each, especially where there is a rock or firm foundation—so that a series of such bridges, (say) 100 ft. long, over a breadth of (say) 1000 ft., would not exceed 3000*l.* to 4000*l.* If iron beams and supports were adopted, the expense would be increased some 15 or 20 per cent.; but, perhaps, it would be the best plan, and cheapest in the end, as then the floor might be renewed without inconvenience, or deranging the iron framework. An important advantage attending such bridges is, that they may be fitted together, and the parts, properly marked and numbered, may be taken apart, and conveniently transported to any part of the country, or be exported to foreign countries or the colonies, and expeditiously fitted together by ordinary labourers or mechanics, either at home or abroad; and, being properly packed, would occupy but a small space, and, therefore, the freight, or carriage, would be comparatively trifling, and probably would be an important article of commerce to the colonies, and thus be a mutual benefit to both. The tracks alluded to may be worked either by steam, horse, or manual power, according to the nature and amount of traffic which may present in the country through which it passes; and, in some cases, Clarke and Varley's system of atmospheric propulsion may be most advantageously adopted, more especially if water-power can be conveniently obtained; by which means, the cost of power would be very trifling, and would probably effect a saving of from 60 to 80 per cent.—but, perhaps, the use of manual power in Ireland would be the most beneficial to the community, in consequence of the low price of labour and want of employment.

* If iron plates be adopted, it would increase the estimate from 150*l.* to 200*l.* per mile.

ADVANTAGES OF GAS-LIGHT IN PRIVATE HOUSES.—The superiority of coal gas as compared with every other material for producing light, has been too long established in this country to require arguments for the enforcement of its claims; the only point respecting gas-light which still seems to be but imperfectly understood, is its applicability to domestic purposes. There are thousands of families who would readily avail themselves of the comfort of gas-light in their dwellings, provided its relative cost and other numerous benefits were known. The use of gas in dwelling houses has already made very considerable progress. Until very lately gas has been merely tolerated; it is now beginning to be looked upon with approval—it is even becoming a necessary of life. It is but a short time since that the use of gas at the front door, in the hall, or in the domestic offices, was considered a bold experiment; now it is in high favour in the palace of her Majesty the Queen, in the saloons, drawing-rooms, dining-rooms, libraries, and other apartments of the nobility, and whilst thus testifying that it yields the purest and most brilliant light, it is in all respects more convenient, more manageable, and very much cheaper than oil or candles; a saving of time is effected, and the labour of servants is lessened where gas is used, there being no candlesticks nor snuffers to keep clean, nor lamps to trim. Comparative cost of light from candles, oil lamps, and gas:—

		Cost		Would cost in gas	
Tallow candles (dips)	1 lb.	0s	6d	0s	2d
ditto (moulds)	1 lb.	0	8	0	2
Composition (ditto)	1 lb.	1	0	0	2¾
Wax (ditto)	1 lb.	2	4	0	2¾
Solar and pale seal oil	1 gal.	4	0	1	4½
Sperm oil	1 gal.	8	0	1	8½

In a bed-room, dressing-room, or nursery, a small gas-light may be kept burning all night at a cost of about a farthing per night, besides the convenience of the light, being in a instant increased to any required extent for warming food for children, or invalids, heating water for washing or shaving, and, by suitable arrangements, for a bath.

EXPENSES OF THE POST-OFFICE PACKET SERVICE.—The amount that will be required for the service of the years 1849 and 1850, on account of the Post-office Packet Service is estimated at 748,296*l.*, against 814,360*l.* voted for the years 1848 and 1849.

DIA-MAGNETISM.—The investigations now proceeding, in the hands of Œrsted, Plücker, Faraday, Weber, and other no less able experimentalists, into the phenomena of dia-magnetism are gradually developing facts that bear in a remarkable manner on all those, less evident, powers which are usually classed under the general term of molecular forces. We may hope within a short time to gain a more satisfactory knowledge of crystallisation, and the laws which determine the forms of crystallised bodies, into which the recent researches of Faraday and Plücker are conducting us. The curious observations of Plücker, which show that in the vegetable kingdom both the magnetic and dia-magnetic forces are, under varying conditions, in great activity, will in all probability direct us toward a solution of the curious problem of the influences of the solar rays on vegetable growth. That dia-magnetism is not another manifestation of ordinary magnetism is now proved by the single fact, that whilst a magnetic body is attracted throughout its mass by each of the two poles of a magnet, a dia-magnetic body is repelled by each pole throughout its mass.—*Athenæum.*

A few days since, on the occasion of the marriage of R. S. Newall, Esq., of Bensham Lodge, Gateshead, wire-rope manufacturer, to the daughter of H. L. Pattinson, Esq., of the firm of Lee, Pattinson, and Co., of the Felling Chemical Works, the whole of the workmen were entertained with a substantial dinner, in a commodious room upon the premises, which was tastefully fitted up, and at the end of which was a gallery for the ladies. John Forster, Esq., one of the partners, occupied the chair, and was supported by several gentlemen who had been invited; altogether the company exceeded 400. The afternoon, and a great portion of the night, was passed with the greatest hilarity and good feeling; while the propriety of conduct and general sobriety of the men were remarkable. Messrs. Newall also gave a dinner and supper to upwards of 70 of their workmen and their wives, at their wire-rope manufactory. In both instances the numerous toasts were responded to with feeling and *éclat*; everything, indeed, passed off most satisfactorily, for every one appeared to strive not only to be happy himself, but to make others so.

LITERARY NOTICES.

The Working-Man's Handbook to South Australia. By G. BLACKISTON WILKINSON. London: John Murray, Albemarle-street.

Mr. Wilkinson is already favourably known to the public by his work on *South Australia, its Advantages and Resources*. This work, though a complete manual in itself, and possessing all the information that could be desired, from its price, was virtually beyond the means of the poor emigrant. To obviate this, and to place within his reach all the necessary practical information at a cheap rate, has been the object of the publication of the handbook. The working-man and the small capitalist may see at a glance whether the colony will suit his peculiar circumstances, what wages he may expect, and what prospects lie before him, as well as the preliminary benefit he may receive from the Government Emigrant Commissioners, or from the Society for Promoting Colonisation. The purchase of outfits, and the regulations on board of the emigrant ships, are concisely treated of in this little work. A brief description is given of the towns, and the different portions of the colony, and the peculiar wants of each are related, and advice is given as to the various localities where the several trades are required. Sound and practical information is given to the agriculturist and cattle farmer, and there will be found some amusing graphic sketches of life in the bush. There is a brief description of the different mines, and a short and succinct account is given of their increase since their first discovery, as well as their future prospects. The book is written in a clear, plain, homely style, and the price it is published at places it within the reach of the poorest classes. Those about to emigrate will do well to purchase this little work; they will find that it will not only be of great service to them previous to their embarkation, but likewise of great practical utility on their arrival in the colony.

The London Mercantile Directory for 1849, *comprising the Names and Addresses of Persons in all Trades, or Business, having any proper Mercantile Relation: with an Office Diary, and Various Matters of Mercantile Information.* London: J. Davall, Cornhill.

The *Post-office London Directory* has now attained such perfection, and possesses such facility of reference to every class in the metropolis, that we fear a rival, and particularly one of such humble pretensions as that before us, will make but little way in public estimation. The compiler of the *London Mercantile Directory* states, in his introduction, that the idea arose from personal observation, that the requirements of many persons, not in London alone, would be met by a directory embracing only the names and addresses of those more properly belonging to the mercantile class; but when we consider the difficulty in drawing the line of separation between the strictly mercantile and trading classes, by what nice and delicate gradations they are interwoven and merge into each other, and how closely the interests of each class are united, we fear few will be found to forego the advantages of a directory containing a list of the entire number of establishments in London, amounting to some 100,000 names, including the Court, the nobility, gentry, professions, merchants, manufacturers, and tradesmen, for one containing only a fraction, of about 6400 names, or one-seventeenth of the whole. Indeed, we notice the omission of some names of firms strictly mercantile; and while it may be a tolerably correct directory to the addresses of brokers, factors, and agents, it can never answer the general requirements of the merchant's counting-house, or the professional office. The diary portion of the volume, and the various lists of public offices, banks, postal details, &c., are very well arranged, and it is much to be regretted, that so glaring an error should have crept in, as to have numbered all the days after August 13 in error, and representing the year as containing only 364 days.

PROFESSIONAL LIFE ASSURANCE COMPANY.

The principles of life assurance, when properly developed, present to society at large advantage, in vain to be looked for from other institutions. To all persons of moderate means, arising from their professional labour, or on which they have but a life interest, the system is deserving of the most earnest consideration. Living probably in respectability and comfort, and surrounded with a family, should the thread of life be suddenly snapped, the latter are thrown destitute upon the world; while, by the setting apart a portion of the income, by way of assurance, a person may secure a sum at his death, which will at least place his family above immediate want, and give them time to consider the best means of securing a future livelihood. The practice of life assurance has extended itself in a most extraordinary manner during the past 20 years; and still we believe there is a wide field for further exertion, for facilitating its accomplishment, and inducing a larger proportion of the population to avail themselves of its benefits. In the *Mining Journal* of the 15th April last, we reported the proceeding of the first annual meeting of the shareholders in this company, when the report of the directors informed them of the highly encouraging position of the company, although less than 12 months had elapsed since the registration of the company. During that period 101 policies had been effected, realising an income of 1015*l.*; a dividend of 5 per cent. was paid on the capital invested; and there was then every prospect of the "Professional" taking a foremost rank among assurance companies, having, in that short period, secured a subscribed capital of 100,000*l.* One great and important feature in the system adopted by this company is the alleviation of the wants of living members, in case of adverse fortune in old age, as well as to provide for the survivors of the assured; and, under its regulations, if a shareholder or an assurer ever comes to want, there will always be found a fund to make provision for him in his old age. After the first necessary inquiries, every policy is valid and indisputable, and no claim will be ever litigated; while, in the cases of suicides and duellists, the survivors receive back, as a right, the premiums paid.

We have just received a copy of an almanack published by this company, which, in addition to the usual pages of an almanack, and their chronological accompaniment, contains extracts from various writers on the advantages of life assurance, and the paramount duty of every head of a family who has anything approaching to a moderately respectable income to secure assistance for his survivors at his decease. The system once commenced, life assurance acts as a stimulus to forethought, and an incentive to industry, producing the happiest results to the individual and to society. There is also a good essay on the effects of life assurance, with tables of the premiums on sums assured by way of annuity, or survivorship, with a complete list of the original proprietors in the company, comprising a respectable array of members connected with all the professions and other stations of life to be found in the kingdom.

IMPROVEMENTS IN MACHINERY FOR ELECTRIC TELEGRAPHS.—Messrs. Henley and Forster, of Clerkenwell, have secured patents for several new details and arrangements in the apparatus for working electric telegraphs. In the first place, a visible index-hand, or pointer, is directly acted on by a single magnet, having each of its extremities converted into two or more poles. An electro-magnet, of the usual horse-shoe form, the ends of which project a little above the coils, has affixed to each a segmental piece of iron, the two ends of which form two poles, so that each pole being parted into two, there are two pairs of poles opposed to each other. The magnet is suspended within the four poles of the electro-magnet, and acts directly on the needle of the dial-plate, so as to move it according as the magnet itself is attracted or repelled. The second portion of their invention consists in keeping the magnetic bar, needle, or pointer, in one position for any length of time, or imparting to it any number of distinct deflections, or movements, by means of currents derived from magneto-electricity, and also in making use of the residual magnetism, to act upon the needle on its return to its stationary position, instead of the force of gravity. The third part of the invention consists in obtaining two distinct currents from the same magnet, and the reverse current being made of equal intensity with the primary induced current, and single or double currents may be sent through any required number of currents at different stations. The fourth consists in an improved arrangement of telegraphic signs or symbols. The fifth is mixing gutta percha with sand, ground into a fine powder for purposes of insulation. The sixth is a current reverser of peculiar construction, whereby the megneto-electrical apparatus is dispensed with, and the voltaic battery substituted, the reverser completing the circuit twice during its motion by the transmission of a reversed current. Seventhly and eighthly, the invention consists in apparatus for regulating the currents and governing the motion of electric time-keepers, and giving motion to the train of wheels.

HARDY'S PATENT AXLES.—In last week's *Mining Journal* we noticed the application of the proprietors of this patent for the extension of the patent right, on the ground that they had not, up to its expiration, realised a profit commensurate with their outlay. The council granted an extension of the patent for five years, on condition that the original patentee (Mr. Hardy) received half the profits, and that the price was not increased to the public, but regulated by the rise or fall of iron in the market. The principal evidence was Mr. Robert Stephenson, who stated that his attention had been first called to the patent axles shortly after the opening of the North Midland Railway, in 1841. He had subjected a great many axles, of various manufactures, to some very severe trials; the patent axles among others, by twisting them and letting heavy weights fall upon them—the aim of the experiments being, to subject them to the same shocks and strains as they would be liable to in case of accident. He made these experiments in consequence of a serious accident that took place on the North Midland Railway, and was satisfied by them of the great superiority of the patent axles. Witness then described the old and the patent process of manufacture—the former rendering the iron crystalline in its structure, and exceedingly brittle; while, by the latter, the fibrous character of the iron was preserved, by which it was rendered extremely tenacious. A section of a patent axle was put into the witness's hand, which he said clearly indicated the fibrous structure of the mass to the very centre of the axle. By the old method the outside, and to some depth, was fibrous, and the interior crystalline. It was hardly possible to appreciate the value of the invention, in the safety it conferred upon life and property in the prevention of accidents upon railways. He knew of no other axle at all equal to it. After the occurrence of the accident to which he had referred, he broke upwards of 50 of the axles of the old manufactures, and was astonished to find that they were uniformly crystalline in their texture, with one or two exceptions. They were, of course, all exceedingly brittle—so much so, that he ordered them to be taken off the line as quickly as possible. The patent axles are now extensively, but he could not say exclusively, used on the North Midland. The cost of the patent manufacture might be somewhat more than the old method, and as the patent axles were sold at a lower price than the old manufactures, the proprietors must have obtained much less profit. The price, however, was comparatively no object, and in the case of an axle he should not hesitate about the price at all. He had not many contracts during the last three years, but he had recommended that the patent axles should be adopted in every case. If his advice were followed, there ought to be no other axles used on any railway throughout the kingdom. Mr. M'Connell, superintendent of the locomotive department on the London and North-Western Railway, said he took part in some experiments that were made in 1843 upon axles. Before the patent axles came into use, Low Moor and Bowling Works axles were considered the best. The price of these axles was from 20s. to 25s. per cwt., the price increasing a little, according to the size of the axle. The price of Mr. Hardy's axles was now 18s. the cwt., also increasing according to weight. Before 1843 they were used to some extent, but in that year he was called upon to witness some experiments at Wolverton, and these experiments quite established their character. In reply to a question from Lord Brougham, Mr. Hardy stated that he had given the matter as much publicity as possible, but his means were limited. He found it extremely difficult to induce the railway companies even to test his axles. It was owing to the energy and enterprise of the present proprietors that the patent axles had been tested, and then so generally adopted.

THE UNITED STATES.—A statement of the imports and exports of the United States for the fiscal year, ending the 30th of June, 1848, has just been made up, and shows a singularly close balance, the imports being $154,977,876, and the exports $154,032,131. As compared with 1847, there is an increase in imports of $8,432,238, and a decrease in exports (fully accounted for by the smaller shipments of grain), of $4,616,491. The year 1847, it will be remembered, was altogether an exceptional one, as it was marked by a balance of exports over imports of $12,102,984, which was a larger excess of exports than had ever before occurred, except in the single year of 1840. Indeed, during the past half-century there have been only seven occasions on which the exports have exceeded the imports, the large aggregate sums constantly brought by emigrants furnishing in some degree an explanation of the way in which this apparent excess of expenditure is kept up.

THE COMMERCIAL BANK OF ENGLAND.—This unfortunate joint-stock bank which had its head-quarters at Manchester, and failed some six or seven years ago, having involved the shareholders (like the Bank of Manchester, the Imperial Bank, and the Northern and Central Bank) in heavy responsibilities, besides the loss of all their capital, had a private meeting last week, and a circular has been issued to the holders of shares, stating that although the debts are all paid off, causes were in operation to prevent the final dissolution of the company. A history of the concern, with particulars of how the money "had been dissipated," is promised. The total liabilities amounted to 193*l.* (including 782*l.*, the estimated amount of bills not sent in, and 895*l.* on notes in circulation, and not yet paid). Against this there was 462*l.* cash in hand, and money receivable from bankrupts' estates and other sources, 1857*l.*—leaving a balance of upwards of 380*l.*

BLACKWALL.—The extension of this line to Bow, where it will unite the Eastern Counties, will be opened in March next.

MINING IN GERMANY.—GOVERNMENT REPORT.

The Government Commissioner, Mr. Seymour Tremenheere, having, in accordance with his instructions, proceeded to Germany, "for the purpose of collecting information as to the laws and regulations which are in force in that country, in regard to the inspection of mines," his report thereon has been presented to both Houses of Parliament. From this document, it appears that the total number of miners in the kingdom of Prussia was, in 1845, 47,141, of whom 36,667 were colliers and iron-stone miners; it is divided into five districts—namely, Brandenburgh, Silesia, Saxon-Thuringia, Westphalia, and the Rhine. Two distinct systems of mining laws exist at present in Germany—the French laws in the Rhine provinces, and the old German laws and customs in the countries on the other side of the Rhine. According to these French laws, no persons can work a mine without a grant or concession from Government, the grantee binding himself to conform to all present and future regulations, and to work the mine on the best principles, under the guidance of the officers of Administration of Mines; to keep everything in proper order, and to provide, in all respects, for the security of the work-people; and any changes in the mode of working must be sanctioned by the Administration. No one can be appointed manager, viewer, or under-viewer, whose qualifications have not been approved of by the Administration.

By a circular of the 10th January, 1819, reciting that delays had occurred in the reporting of accidents, it is required that notice shall be given of every accident occasioniug death or grievous bodily injury, within 24 hours, to the office of the Administration of Mines for the district. The employment of females underground was abolished in 1827, and that of boys under 13 years of age in 1836. The principle on which the old German laws in operation in the other districts of Prussia are based, is that all mining property belongs to the State; the inspector has immediate authority over everything concerning the concession; the purser, manager, and underground bailiffs, and other officers and work-people, are to yield him obedience in the execution of all present laws, regulations, and instructions; he is to consider what is the best course to be pursued by each mine in his district; to avoid all partiality, and to promote, as far as in him lies, the general mining interests. He must see that nothing is done contrary to the principles of good mining, or so as to endanger the health or lives of the workmen. Should any mode of working appear, contrary to previous anticipations, to be likely to prove dangerous to the mine, or to the people employed, or should the danger appear imminent, he must forthwith stop the works, and refer to the district board for further instructions. Both these systems unquestionably aim at protecting the health and the lives of the persons working in the mines, as one of the principal objects in their administration, and the miners have the benefit of the frequent inspection of the mines by the scientific and able officers charged with that duty; and minute investigations into, and accurate returns of, every fatal accident, keep the Administration informed of their number, and the circumstances attending them, and suggest inquiries into the causes of their increase or decrease in the different districts.

The value of the Council of Mines may, in a great measure, be estimated by the accuracy with which the fluctuations in the number of accidents in the several districts are recorded. This truth may be illustrated by a few instances. From 1825 to 1835, the number of accidents in the district of Bochum, Westphalia, was, 1 1-5th per 1000 workmen; from 1835 to 1843, they increased to about 1¼ per 1000; and, from 1844 to 1848, they had further increased to nearly 2 per 1000—the increase keeping pace with the number of men employed, and the progressive depth of the pits. For four districts for the 10 years, from 1825 to 1835, there were fatal accidents in the district of Bochum—1 1-5th per annum for every 1000 miners; Essen and Werden, 1 4-5ths; Ibbenhuren, 1·1; and Mühlheim, 0·5 per annum per 1000; and this return is the more satisfactory as showing that Mühlheim, where explosive gas is very abundant, the proportion of fatal accidents has been the least. Subsequent returns for Essen and Werden, for five years, give the following results—1836, 3·54; 1857, 1·43; 1838, 3·91; 1839, 0·04; 1840, 0·03. At Mühlheim, there were none in the first four years; and only ·77 in 1840—making a total of 10·95 in five years, or 2 1-10th per annum. For the next seven years, the returns for the same districts were 16·8, or nearly 2½ per annum per 1000 miners. The following table gives the results for 10 years, from 1836 to 1845, for the whole of the mining districts on this side the Rhine:—

DISTRICTS.	NUMBER OF LABOURERS. Av. of each yr.	Total for the 10 yrs.	Number of Accidents in 10 years.	Number per annum in 10 years.
Siegen	7,629	76,288	71	9·307
Düren	9,636	96,357	148	15·359
Saarbruck	6,669	66,689	84	12·596
Total	23,934	239,331	303	12·660 av.

Or, in the 10 years in Siegen, one in every 1074 met with a fatal accident; in Duren, one in 651; and, in Saarbruck, one in 791. These accidents include copper, lead, and iron mines, and quarries, which are less dangerous; Mr. Tremenheere, therefore, examined the records for Duren, as relatiog to coal alone, when he found the average total for six years, from 1842 to 1847, to be 3 1-12th per 1000 per annum, so greatly does the loss of life in collieries exceed that of other mines. Under such returns as these, no instances of neglect, imperfect ventilation, or other source of danger, can long escape observation; while it is notorious that, in our own country, great neglect in the most essential details of working collieries takes place; and that one-half the accidents which occur, are passed over in silence, and never come before the public.

Among the German miners there are no symptoms of that low sense of moral dignity, or material comfort for which the colliery and mining population are, unfortunately, conspicuous; drunkenness is by no means common; their houses are neat and clean, and their children all partake of the advantages of education accessible to all the population; they appeared steady, orderly, industrious, and respectful, and not below the level of the rest of the labouring classes in mental cultivation. Their wages are settled on the basis of an average of the good and bad times of the year. Strikes or any other vexatious combinations against employers were equally rare, and although their earnings are low, the small contribution paid out of them to the general benefit society, which embraces all the colliers and miners in the country, suffices to secure them relief in cases of illness or accident, and a moderate provision in old age.

From Mr. Odenheimer, chief of the Department of Mines in the Duchy of Nassau, we learn, that the principal dangers in the mines arise from the friable nature of the roof and from choke-damp. The sub-inspectors are enjoined to make frequent visits to the most dangerous mines; while others were visited perhaps only once a quarter. The principal arrangements, for which provision is made, are a proper system of ventilation and a good arrangement of shafts, all for the interest of the proprietors, and the cost is regained in the course of working, for more coal can be got out of a well-arranged work, and less wages are demanded in a well-ventilated mine. The total number of mines has greatly increased since the present regulations were adopted in 1826, showing that they did not operate with the least restriction on mining industry; but rather the contrary. A commission, however, assembled to consider the subject, has come to the conclusion that nearly all the restrictions of the old German code should be abolished, and the whole assimilated with the French law, in operation on the provinces of the Rhine. From the contemplated alterations in the mining laws, the capitalists of Germany are about to enter upon a new era of mining industry, in possession of many great advantages; they will have a skilful orderly and well-instructed class of workmen; the demand for coal will be increased, and the iron and other metal works, with the general consumer, be greatly benefitted, more capital will be invested, and Germany will make still greater strides than she has ever yet made towards the supply of her own wants in coal and metal.

From the reports of the working of the system of inspection in France, Belgium, and Germany, it would appear free from difficulty for the Parliament of this country to adopt a moderate measure of underground inspection, whi ch avoiding the minute interferences and the power of direction and control in, force on the continent, may lead to greater care on the part of owners and managers of mines, in all that concerns the health and safety of the work people, by the temperate and judious suggestions of duly qualified persons; and by the publicity of these reports, at the discretion of the Secretary of State, or when called for to elucidate the cause of serious accidents.

VON RATHEN'S COMPRESSED-AIR LOCOMOTIVE.—We have received a pamphlet, just issued, in which is given comparisons of the expenditure and cost of *establishing* and *working* the atmospheric system on the South Devon Railway, with the cost of the Baron Von Rathen's system, so often noticed in this Journal—the latter system being stated in the pamphlet to be much more economical than the former—the cost of the present plan being set down at 480,000*l.*, and the cost of that proposed at 124,000*l.* A comparison of the cost of working between the atmospheric system on the South Devon line, and Von Rathen's system of locomotion by compressed air, carried along in reservoirs with the train, is also given, and a saving of 10,000*l.* per annum is stated as the result. The pamphlet enters into many particulars respecting the Baron Von Rathen's systems, and deduces from all the circumstances, that not only are they superior to all known systems in point of economy of construction and working, but in many other particulars also. After the length of time the inventor has devoted to perfect and bring this invention before the public, we cannot help wishing him success. We understand that in a few weeks time a public trial will take place.

PROGRESS OF THE GAS MOVEMENT.

The excitement in the City, respecting the exorbitant charges by the gas companies, and the monopoly which they hold, is making considerable progress to the obtainment of a remedy for the evil. A large meeting of the commercial and trading classes was held at the London Tavern, on Wednesday last, for the purpose of appointing a committee to compel the present companies to lower their rates to a fair and equitable charge.—Mr. JOHN DILLON took the chair, and, in the course of his remarks, said that, looking at the price at which gas could be made in London, it ought to be furnished cheaper than in other towns and cities; but it was much dearer. He put it to the meeting whether it did not appear strange that 3s. 6d. per 1000 feet should be charged to one customer, and 6s. per 1000 ft. to another, for the same article, and yet that was done to the public and private gas consumers of the City of London.

Mr. MORLEY moved the first resolution—"That looking to the price charged, and to the quality of the article supplied, the inhabitants of the City of London are paying for the gas they consume considerably above its fair value," which was carried unanimously.—Mr. FICKLING, who seconded the motion, complained that the Chartered Gas Company had charged their consumers in the City 2s per 1000 feet more than those out of it, and it was only last Ladyday that the costs were equalised. He found, on looking at a return moved for by Mr. Hume, in 1847, that the prices of coal were as follows.—London, 16s. 2d. Liverpool, 14s.; Birmingham, 17s.; Stockport, 19s. 3d.; Glasgow, 23s. 9d. (Cannel coal). It was evident from these prices, that some other reason than the cost of coal must be looked for to justify the excess in the charge for gas. What were the items which constituted the cost of producing gas? First, the cost of the material from which it is made; that, as he had shown, was 16s. 2d. He had an extract from a report on the Petonville Prison, which he would read to show what the cost of gas produced in London really was. From this it appeared that the cost of 2,693,000 cubic feet of gas, consumed in the prison in the year was 353*l.* 13s. 10d.; but which, if obtained from a company at the price formerly paid, 7s. per 1000 cubic feet, would have been 942*l.* 11s.—showing a saving of 588*l.* 17s. 2d. From the statement even of Mr. Lowe, who was engineer to the Chartered Gas Company, the residual matter was of so much more value in London than in Liverpool, that gas could be manufactured 5d. per 1000 cheaper in the former place from that source alone, as the larger the quantity of gas made the cheaper was the production; the cost of manufacture could form no ground for its greater cheapness in provincial towns. The quantity of gas consumed in London was 500,000,000 cubic feet, conveyed through 60 miles of mains; while in Liverpool there was but 211,000,000 cubic feet consumed; but this quantity was conveyed through 150 miles of mains—in London, therefore, there would be less loss from leakage.

Mr. PONTIFEX, in moving the next resolution, which was also carried unanimously—"That the gas companies supplying the City have been permitted to establish a monopoly never contemplated in the original gas Acts; and whilst satisfactory contracts have been entered into with regard to the public rights, the interests of the private consumers have not been protected, and are not now fairly and efficiently represented," said they were all entitled as traders and commercial men to have the benefit of competition in the supply of so great a necessary as light. One ton of coals, which he could get for 12s., would produce from 9000 to 10,000 cubic feet of gas—consequently, his gas cost but 1s. 2½d. per 1000 feet, the coke and residuum paying the cost of manufacture. If proper economy was used, 1s. 6d. per 1000 feet would afford sufficient profit when the supply was large. He was supplying the Great Western Railway Company at Swindon at 1s. 8d. per 1000, and certainly did not lose by it.

It was eventually resolved—"That a committee be appointed, with power to add to its number, for the purpo se of protecting the interests of the gas consumers of this city, by taking such steps as may seem desirable in order to obtain gas of the best or most economic quality at a moderate price, with the security of a fair system of metage."

Mr. HITCHCOCK mentioned a most unwarranted proceeding on the part of the gas company. After paying his yearly account, the collector called one day with another bill for 40*l.*, stating that it was the difference between what he had paid the previous year and the bill just settled, as he could not have consumed so much less gas, and the metre had *gone wrong*. For very fear of the company's monopoly, he put up with the imposition, and paid it. In another column will be found some further remarks on the superiority of gas in private dwellings, and its economy over other lights.

CALIFORNIA—THE WHEEL-RIGGED SHIP.—Mr. Browne, the patentee, proposes, by his invention, to remedy the numerous desertions of the crews from vessels arriving at the different ports in California. The vessel is to be navigated by blind, one-armed, and one-legged men, in preference to able bodied men; the former, from their helplessness, would remain by the vessel, while the latter would immediately desert for the gold region. The ship, which can either be a sailing vessel or steamer, is to have five or six large masts; to these are attached square-rigged sails, which are worked simultaneously by a wheel—the blind men at this wheel, which likewise steers the vessel, taking the word of command, larboard and starboard, from the commanding officers. There is but one range of sails, no ropes, or any rattlines to climb; and the reefing is performed by machinery, which causes the sail to fold to the mast. In tacking, one sail can be backed, and the others wheeled round with facility. A second range of sails could be adopted, which might be easily worked; but the inventor at present confines its practicability to one. The construction of the sails appears somewhat similar to those used by the Russian lodjes in the White Sea; these, however, are worked by hand instead of machinery. Their voyages, are solely confined in going from headland to headland; and, in cases of foul wind, they invariably drop their anchors. We are not navigators enough to say whether, in the present instance, a long tempestous voyage would be safe, or practicable, in a vessel of the nature proposed by the inventor. The idea appears perfectly feasible, the machinery proposed excessively plain, and susceptible of great improvements. However simple and crude the invention appears at present, probably an intelligent and practical shipwright, on examination of the details, would be able to throw out such suggestions as would enable the patentee to apply his invention to some purposes of nautical utility, particularly at this period, when a preventive to the abandonment of valuable property is so much needed.

ABERDEEN RAILWAY.—The preference stock having been taken up, the directors have resolved to proceed with the works, with the view of opening the whole line to Aberdeen before the close of the ensuing summer.

BRIGHTON.—Such guaranteed 6 per cent. shares as have been fully paid, are to be converted into 6 per cent. stock.

SOUTH DEVON RAILWAY.—At the commencement of the present year a special meeting of the Bristol shareholders of this line was held at Bristol, for the purpose of taking into consideration some statements contained in a pamphlet issued by Mr. Gill, the late chairman of that company. At that and subsequent meetings, a great deal of angry discussion took place relative to the atmospheric system of traction, and especially as to the loose manner in which the accounts of the company were kept. A lengthened correspondence on the subject also appeared in the *Times*; and such has been the satisfaction felt by many of the shareholders at the conduct of Mr. Gill, that subscriptions have been raised for the purpose of presenting that gentleman with a testimonial in the shape of a piece of plate, and the subscriptions amounted to no less than 2000*l.* This valuable proof of the regard of the shareholders has been duly and suitably acknowledged by Mr. Gill.—*Times.*

NEW PATENTS.

C. F. Whitworth, gent., Hull, for improvements in preventing accidents on railways.
J. Bottomly, Bradford, York, manufacturer, improvements in machinery for weaving.
C. T. Pearce, Esq., Park-road, Regent's-park, for improvements in apparatus for obtaining light by electric agency.

DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

Deane, Dray, and Deane, London-Bridge, cinder-sifter.
G. Allen, Stepney, safety catch for the handles of railway and other carriage doors.
W. Burgess, Blackfriars-road, gutta percha table-holder.
Welch, Margetson, and Co., Cheapside, serial stock.
M. M. Gariel, Paris, M.D., the aqueductor for surgical purposes.
E. N. Fourdrinier, Camden Town, hat suspender.—*Mechanics' Magazine.*

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Carr's Hartley 14 9—East Adair's Main 12—Hartlepool West Hartley 14 9—Holywell Main 14 6—New Tanfield 12 6—North Percy Hartley 13 9—Ord's Redheugh 12—Ravensworth Pelaw 12 6—South Pontop 11 6—Tanfield Moor 12 9—Townley 12 9—Wylam 13—West Hartley 14 6—Wall's Ends Brown's Gas 12—Framwellgate 14 6—Percy Bensham 13 6—Eden Main 13—Lambton Primrose 15—Braddyll's Hetton 15 3—Haswell 16—Lambton 15 9—Russell's Hetton 15 9—Stewart's 15 6—Whitwell 14 3—Caradoc 15—Cassop 15—Hough Hall 14—Hartlepool 16—Kelloe 15—Thornley 14 9—Trimdon 14—Adelaide Tees 15—Seymour Tees 14 3—Tees 15 6—West Cornforth 14—Cowpen Hartley 14 9—Derwentwater Hartley 14 6—Hartley 14—Howard's West Hartley Netherton 14 9—Nixon's Merthyr 20 6.—Ships at market, 159; sold, 52.

WEDNESDAY.—Buddle's West Hartley 15—Carr's Hartley 15—East Adair's Main 12 6—Holywell Main 14 6—New Tanfield 12 6—Ord's Redheugh 12 6—Ravensworth West Hartley 14 6—Tanfield Moor 13—Wylam 13—West Hartley 15—Eden Main 16—Cowpen Hartley 15—Derwentwater Hartley 14 9—Hartley 14 3—Wall's End Brown's Gas 12 6—Framwellgate 15—Gosforth 15—Hedley 14 6—Percy Bensham 14—Braddyll's Hetton 16—Hutton 16—Hetton 16 9—Haswell 17—Jonassohns 14—Lambton 16 6—Lyons 16—Russell's Hetton 16 6—Stewart's 16 6—Caradoc 16—Heugh Hall 15—Hartlepool 16 6—Kelloe 16—Thornley 15 6—Trimdon 14 6—Cowndon Tees 14 6—Seymour Tees 15—Tees 16 6.—Ships at market, 129; sold, 66.

FRIDAY.—Bate's West Hartley 14 6—Buddle's West Hartley 15—East Adair's Main 12—Hartlepool West Hartley 15—Holywell Main 14 6—New Tanfield 12 6—North Percy Hartley 14 6—Ord's Redheugh 12 6—Ravensworth's West Hartley 14—Tanfield Moor 13—Townley 13—Wylam 13 6—West Hartley 15—Walls End Bewicke and Co. 15—Brown's Gas 12—Framwellgate 15—Gibson 14 3—Percy Bensham 14 3—Eden Main 16—Hutton 16—Hetton 16 9—Lambton 16 6—Lyons 16—Morrison 15—Stewart's 16 6—Shotton 16—Whitwell 15—Hartlepool 16 9—Thornley 15 9—Cowndon Tees 15—Seymour Tees 15—Tees 16 6—West Cornforth 15—Whitton Park 15 6—Cumfoord 17—Derwentwater Hartley 14 9—Llangennech 22 6—Ships at market 113; sold, 44.

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BY J. Y. WATSON, ESQ., F.G.S.

GWENNAP DISTRICT.

SOUTH WHEAL BASSET TIN AND COPPER MINE (in the parish of Illogan) is in extent 600 fms. long and 600 fms. wide, and held on lease from Lady Basset for 21 years, from the 10th January, 1832, at 1-15th dues. In 128 shares. Amount paid up, 20*l.* 10s. Market value, 220*l.* Purser and manager, William Richards, Esq., Redruth; principal agent, Capt. James Pope; day and night agents, James Middleton and James Juliffe, jun.; clerk and storekeeper, Thomas Richards. The present company commenced operations in January, 1832; and the ores returned to the end of December, 1848, have been—

Copper ores	Tons	35,632	5	2	0	yielding in money,	£123,264	10	3
Tin ores		43	4	0	6	ditto ditto	1,919	7	5
Tinstuff		—				ditto ditto	402	7	11
Total returns							£325,646	5	7

The dividends of profit paid to the shareholders to the end of December last, have been 32,000*l.*, or 25*l.* per share. The machinery consists of two steam-pumping engines, two other engines for whim drawing, stamping, and crushing. The persons employed are 300, and the monthly cost, on an average of the last six months, has been 830*l.* per month; but is now increased to 900*l.* The returns, on an average for the past six months, have been about 1250*l.* per month; but are now increasing. The mine is situated in one of the richest districts in Cornwall—in the immediate vicinity of Carn Brea, South Frances, North Pool, West Buller, and other prosperous mines. Some of the ore is very rich, and the bulk realises a price above the average of the county. The prospects at the present time are good; and, upon an improving standard, will no doubt pay considerable profits to the shareholders. The shares, within the last 12 months, have risen from 80*l.* to 220*l.*

[To be continued in next week's Mining Journal.]

Mining Correspondence.

ENGLISH MINES.

BARRISTOWN.—Capt. T. Angove (Feb. 16) reports—We have not yet cut the lode in the adit end east; the ground, east of the slide, is still broken. In the 16 fm. level end east we have discovered a good course of ore, producing over 1½ tons of lead per fm.; we have also risen on it about 2 fms., and find it equally good. The stopes further west, in the back of this level, are producing about 6 cwts. of lead per fm. The pitches are producing about the same quantity of ore as heretofore. We calculate that our quantity of ore will increase in the ensuing month.

BEAM.—Mr. Walter Treleavin, the purser, (Feb. 20) reports.—The work connected with dividing and casing down the whim shaft, to the 32 fms. level, will be completed by to-morrow afternoon. In the course of four or five days the plat in the 32 fm. level will be enlarged, and in the cross-cut north, to intersect the north, middle, and south lodes, and the other cross-cut south, to intersect the caunter lodes, will be commenced. It may require a fortnight to open the cross-cut north to the lodes, and rather more to intersect the caunter lodes south. The intwork bargains are opening more tribute ground, and the produce of the pitches continue to justify the favourable report and opinion entertained of the mine. As the casing down of the Whim shaft has necessarily occasioned some delay, we have not calculated on raising so much tin this month as was returned last. We expect to raise above 6 tons this month. If the adventurers would advance 4000*l.* or 5000*l.*, to open the mine more extensively, and sink a new shaft to the 82 fm. level, below the adit, we should then be able, at the lowest calculation, to raise 20 tons of tin per month, which will amount to more than 1100*l.*, at about 600*l.* cost, and a considerable larger quantity of tin might be raised, at the same proportion of out-cost.

BEDFORD UNITED.—Capt. James Phillips (Feb. 21) reports—At Wheal Marquis, the ground in the 103 fm. level south is somewhat improved. In the 90 fm level east we have cut into the lode about 2 ft. without reaching the north wall; the lode is producing good stones of ore, altogether more promising than it has been. In the 80 fm. level east we have cut into the capels, and the lode laid open is unproductive. There has been no lode taken down in the 70 fm. level east; but the ground is improved for driving.

CWM ERFIN.—Capts. A. Francis and S. Nicholls (Feb. 17) report—Our 20 fm. level east is spangled with ore for the width of the end; but at present will not prodnce much to save for dressing. The stope behind the end is looking rather better than when you were here. The rise over the 20 fm. level west still continues rather poor. All the stopes over the 10 fm. level will yield from 8 to 9 cwts. of ore per fm. Our machinery is being erected as fast as we anticipated, and as the dry weather seems to be set in, we shall use every exertion to connect our present bale at the engine-shaft to the new wheel, in order that the old wheel may do nothing but crush.

DEAN PRIOR AND BUCKFASTLEIGH.—Captain H. Choake (Feb. 21) reports—There is no improvement in the 20 fm. level west since my last report. The lode in the 40 end, west of cross-cut, has a very favourable appearance, although at present poor, being composed of capel, spar, and prian; in the past week we have broken some good stones of ore in exploring on the lode. In driving east of the 40, the past few days, we have been desuing the lode, and we shall commence taking down the orey part to-morrow. Saturday next being the monthly setting day, I shall be prepared to state, in my next report, the number of fms. driven in the different departments during the past month.

DEVON AND COURTENAY CONSOLS.—Capt. N. Scissombo (Feb. 17) reports—In the end driving west, in the 40 fm. level, the lode is about 1 foot wide, composed of mundic and peach, and spotted with ore. In the end driving east, in the 50 fm. level, on the south lode, the lode is 2 ft. wide, being a hard and strong lode—capel mixed with mundic and spots of ore. There is no lode yet discovered in the end driving north on the cross-course in the 40 fm. level.

EAST BIRCH TOR (TIN).—Capt. Thomas Moyle (Feb. 21) reports—The lode in the engine-shaft is 5 ft. wide, and worth about 7*l.* per fm. Now we have our engine at work, we are sinking our shaft with 12 men with all possible dispatch. We have the stamps at work on the tin ore that we are raising out of the shaft; and, if our lode continues even as it is, we hope to be able to keep our nine heads of stamps constantly at work. We are now making some alterations in our dressing floors for the better cleaning of the tin, and also for the cheaper mode of dressing it. The tributers' tin was sent off yesterday to the smelting-house, and you will receive the ticket in a few days.

EAST CROWNDALE.—Capt. S. Paull (Feb. 17) reports—The ground in Diamond's engine-shaft continues favourable for sinking; the lode is composed of peach, prian, spar, mundic, and spots of tin. Thomas's lode, in the adit level west, continues to look well, although the ground is changed, and become considerably harder, and more spare to drive. The lode is composed of peach, prian, killas, mundic, and tin, and will, when all is taken down, produce about 45*l.* worth of tin per fm.; the stopes in the back of this level continue without much alteration, the lode about 10 ft. wide, composed of peach, spar, mundic, and tin on the north side, and killas, with small strings of tin, on the south side, worth 25*l.* per fm. We are getting on as fast as possible with our new additional 12 heads of stamps, and hope to have all ready to work by Wednesday evening.

HOLMBUSH.—Capt. W. Lean (February 20) reports—The ground in the 132 fm. level, west of the diagonal shaft, in the cross-course, is still hard. The ground in the 120 fm. level cross-cut, south-east of Hitchens's shaft, is moderate. The lode in the 120 fm. level south is 3½ ft. wide, composed of quartz and stones of lead—saving work. The lode in the 110 fm. level south is 4 ft. wide, composed of can and lead—saving work, and leaving tribute ground both in the back and bottom of the level. The Flap-jack lode, in the 100 fm. level east, is 20 in. wide, composed of spar, mundic, blende, and stones of copper ore—ground still favourable for driving, and every effort is being made to reach the great cross-course. We have taken down the lode in the pitch, in the bottom of the 120 fm. level, and find it has somewhat improved in lengthening as we get down—the bunch of ore being now from 3 to 4 fms. long and 18 in. wide.

KINGSETT AND BEDFORD.—Capt. J. Spargo (Feb. 17) reports—I have just returned from this mine, and am happy to inform you that the lode near the greens is looking splendid, and am daily expecting to meet with something grand here. Not being sufficiently recovered from my late illness, I was afraid to venture in the water myself; but Capt. Harris broke some splendid stones of lead, spotted with copper, and, according to his statement, the lode is running due east, or nearly so, as we expected; it is 4 ft. wide. I examined some of the stones broken from the foot-wall, and carefully compared them with Great Wheal Friendship ore, and no man living would know the difference. The distance we have to drive to cut the great lode east, which is opened on at surface, is from 60 to 70 fms., where it will be from 60 to 70 fms. deep. We shall do but little on the lode near the greens for 9 or 10 days, as it will take us that time to complete the road, &c.

—Capt. Harris (Feb. 17) reports—The lode in Bedford does not look quite so well, although we are breaking good stones of lead, at which we are not deterred, as lodes frequently do change. I think we are in the western lode to-day, as we have broken some stones with lead in them; but shall not be able to give particulars for some days. The lode on the lower side of the greens looks well, and we broke some large stones of lead and spots of copper, and the lode is much larger than it was, being now 4 feet big.—*Feb. 21st.*—As soon as the stuff is cleared, I shall put two men on the sparry lode east; two men are shoding for another lode east. We are about 2 feet in the western lode, and have broken stones only spotted with lead. I do not think the lodes have met as yet; there are also some lodes further west, and we shall drive on, in order to ascertain. The greens lode is underlaying north and looks extremely well, near 4 feet wide, and we have broken good stones of lead and spots of copper in said lode; we shall not be able to do anything more in this lode until the adit is sollered over, which will be in about eight or nine days, and after that is done, I hope to give you further information. The Bedford lode in the rise looks much as usual; we have left the rise for a few days, and are cutting through the lode as you recommended, in order to ascertain how large it is and what is in it. I could not put any other men to do it, as they would be hindering the men in the rise, and would only be throwing away money to do so.

KIRKCUDBRIGHTSHIRE.—The agent (Feb. 17) reports—The lode in the 50 end, east of Stewart's, has much improved in size this week; but, from the sudden alteration of colour, it appears to have entered the stratum of black rock which precedes the ore ground in the 30 fm. level. The cross-cut north, in the 30 end east, is in a hard dark coloured stratified rock, with much sulphur interlaminated in the cleavage. The lode in the 20 end east is about 1 ft. wide, and appears to be approaching to the change in the rock as in the level below. The lode in the 40 end, west of Keith's, is 3 feet wide, which has produced some good work for lead this week, although not so good for the last day or two. I enclose you our setting report, by which you will see we are proparing to sink Stewart's shaft again.

LAMERHOOE, WHEAL MARIA.—Capt. J. Tabb (Feb. 13) reports.—At

the engine-shaft, we have completed plat in the 80 fm. level, put in penthouse and footway, and are now in the course of sinking Davey's shaft. We have cut bearer holes for cistern for standing lift, and sunk 7 fms. of ground. The work in both shafts are progressing favourably, and the men are to have a premium of 6*l.* for each shaft, should the sinking be completed the first week in June—that is, the engine-shaft to reach as deep as the 60, and Davey's as deep as the 50 fm. level.

LEWIS.—Captain S. S. Noell (Feb. 17) reports—The lode in the 70 east, on south branch, is 1 ft. wide, worth 5*l.* per fm. The lode in the 70 west, on south branch, is 1 ft. wide, producing some good stones of tin, and very promising. The south branch in the 60 east, is 2 ft. wide, worth 8*l.* per fm. In the 60 west, on south branch, the lode is worth 8*l.* per fm. In the winze sinking below the 60, on south branch (which is 10 fathoms west of the 70 end west), the lode is 3½ ft. wide, worth 40*l.* per fm. The lode in the 50 west, on south branch, is 10 in. wide—unproductive. In the winze sinking below the 50, on south branch, the lode is 2 ft. wide, worth 11*l.* per fm. The lode in the 50 east, on Cock's branch, is 2 ft. wide, worth 9*l.* per fm. The lode in the winze sinking below the 50, on Cock's branch, is 18 in. wide, worth 7*l.* per fm. The lode in the 50 east, on Rolphe's branch, is 15 in. wide—saving work for tin. The lode in the 40 west, on south branch, is much the same as when last reported. The lode in the 40 east is 2½ ft. wide, yielding some good quality tinstuff.

LOSTWITHIEL CONSOLS.—Capt. Eustace (Feb. 19) reports.—The end is now just 24 fms., and increasingly wet. We had 4 or 5 fms of hard ground, eased again now. The branch is turned more south, and, therefore, more likely to arrest the Millan lode first, if not heaved too far. We may hope to see the caunter lode before next (March) pay day, and perhaps see something worth while in it.

MENDIP HILLS.—Capt. F. C. Harpur (Feb. 19) reports—In the rise above the 20 fm. level we are up 1 fm. 4 ft., where the lode is 5 ft. wide, composed principally of flookan and soft white spar, with small veins of lead at times. In the slag department we have, since I last wrote you, smelted our pile of slags, about 10 tons 12 cwts., which produced 1 ton 12 cwts. 3 qrs. 12 lbs. of lead, being rather over 3 cwts. of lead per ton of slags; this, I am pleased to say, is a higher produce than we have before had from the furnaces, which fully proves, that as we proceed towards the main deposit of slags it improves in quality. In the slag ground, the entire depth of the open cutting is at present about 23 ft., 15 ft. of which is slag stuff, that requires to be removed to the dressing floors, and contain some very good work.

SOUTH WHEAL JOSIAH.—Capt. J. Hambly (Feb. 20) reports—Through the medium of your Journal I am happy to inform the adventurers in this mine that our prospects are most flattering. In driving into a high hill which stands before us, we have a large fine lode, composed of everything we could wish but a solid course of ore, which, from the indications, we may reasonably expect to have soon; three persons are employed in driving at 15s. per fathom. West of this is Maria great south lode, which is made up of soft gossan and spar, black and green oxide of copper, with black ore, and a strong capel to the south, with spots of yellow copper in it, embedded in a fine soft clayslate. With these indications, I think this mine may be fairly rated as one of the best speculations in the neighbourhood.

SOUTH WHEAL MARIA.—Captain G. Francis (Feb. 22) reports—The ground in the 20 fm. level, east from the engine-shaft, continues favourable for driving, there being still a flookan on the north wall. The lode has been cut through this week, where it is about 2 ft. big, composed of mundic, peach. &c., with good copper ore interspersed throughout. I am glad to say it is much less expensive to cut through as we get east. We have driven several fathoms since we expected to have met with the caunter lode. We passed a branch 10 fms. behind the present end, but it has very little the appearance of the caunter where we have seen it, both at this level and at the surface.

SOUTH WHEAL TRELAWNY.—Capt. W. Lean (Feb. 19) reports—The lode in the 30 fm. level, north of the engine-shaft, is making two good walls, about 2½ ft. apart, and on each there is a branch 5 in. wide, composed of barytes, prian, mundic, and sprigs of lead—ground more favourable by far then it has been for a great many fathoms driving, and the lode getting more settled since we have passed through the elvan course; but one thing is evident, we are not deep enough to expect much mineral; the cross-cut west, in this level, is extended (beyond the lode reported on above) 2½ fms., wherein neither branch or lode is seen.

TRELEIGH CONSOLS.—Capt. W. Symons (Feb. 17) reports.—Garden's shaft, below the 113, is sinking in the country. In the 113 fm. level, west of Garden's, the lode is 3½ ft. wide, with a kindly appearance—stones of ore and mundic. In the 100 fm. level, west of ditto, the lode is 15 in. wide, but little ore. In the 80 cross-cut, northwest of Garden's, to cut a north part of the lode. In the 60, west of ditto, the lode is 2½ ft. wide, rather of a promising character, with but little ore. In the 20, east of Wheal Parent, the lode is 15 in. wide; it contains mundic and spar, with a small quantity of ore; in the 20, west of ditto, the lode is 8 in. wide, composed of spar and flookan. In the winze below the adit ditto, the lode is 20 in. wide,—spar and caples—more promising.

TRENANCE.—The purser, R. Dalton (February 7), reports—The following work was set on Saturday last:—No. 1. The 18 fm. level north to stope up, by six men, as directed, at 2*l.* 10s. per fm; it will be seen that I have set on six men, to stope and prove this level as early as possible, for much depends on the direction which the ore takes, for fixing on a proper place to erect the engine and sinking the engine-shaft, which ought to be commenced about April month; there is a large piece of ground to shoot away, which will prevent our raising much ore this week.—No. 2. The 12 fm. level southwest, to stope up as directed, by two men, at 1*l.* 18s. per fm.; this level continues to be very orey, and the men see amongst a good deal of malleable copper about this place.

WEST WHEAL JEWEL.—Capt. R. Johns (Feb 18) reports.—In the 70 fm. level, west of Williams's cross-course, on Wheal Jewel lode, lode not taken down in the past week. In the 57 fm. level, west of Williams's cross-course, on the same lode, lode not taken down in the past week. In the 47 fm. level, west of Williams's cross-course, on the same lode, the lode is 2 ft. wide, worth 7*l.* per fm. In the deep adit level, west of Hodges's cross-course, we have not cut the lode as yet west of Williams's cross-course. In the 30 fm. level, west of Quarry shaft, on Tolcarn tin lode, lode not taken down in the past week. In the deep adit, west of Quarry shaft, on the same lode, lode unproductive. The stopes in the back of the 12 fm. level, west of Pryor's winze, working on tribute, worth 15*l.* per fm.; the stopes east of this winze, working on tribute, worth 13*l.* per fm. The stopes in the bottom of the 12 fm. level, east of Tregoning's shaft, working on tribute, worth 15*l.* per fm; the stopes in the bottom of this level, east of Tregoning's winze, working on tribute, worth 20*l.* per fm.

WHEAL BENNY.—Capt. J. Tabb (Feb. 16) reports.—We have cut a lode at the Ford shaft, which at present is small; we thought the leading part to be still further north—was thinking to prove this before writing.

WHEAL MARY ANN.—Capt. Peter Clymo (Feb. 19) reports—The lode in the 50 fm. level, south of Barratt's shaft, is 3 ft. wide, and worth 15*l.* per fm. Barratt's shaft is sunk 6 fms. below the 40 fm. level, where the lode is 2 ft. wide, worth 9*l.* per fm.; this shaft is holed with a borer-hole to the rise in the back of the 50 fm. level, and we hope to complete the shaft to the 50 fm. level in a fortnight. The lode in the 40 fm. level, south of Barratt's shaft, is 3 ft. wide, and worth 12*l.* per fm.; the stopes in the back of this level are producing a fair quantity of lead. Pollard's shaft is sunk 6 fms. 2 ft under the 40 fm. level. The lode in the 40 fm. level, north of the shaft, is the same as last reported, the men having been employed in rising against a winze sunk under the 20 fm. level, for ventilation, &c. The lode in the 40 fathom level, south of the shaft, is 14 ft. wide, and worth 4*l.* per fm. The lode in the 30 fm. level, south of the shaft, is 7 ft. wide, worth 10*l.* per fm.; the stopes in the back of this level are producing 1 ton of lead per fm. We shall sample, on Friday next, from 50 to 55 tons of lead ores.

WHEAL SARAH.—Capt. John Spargo (Feb. 22) reports—Our rods from the south wheel to the old shaft is completed, and will commence working this day. We expect the water will be in fork to the bottom by Monday morning. Our dressing house is up and timbered. We are getting on with our floors, &c., as fast as possible.

WHEAL TRELAWNY.—Captain J. Bryant (Feb. 20) reports—We have commencnd sinking Phillip's shaft under the 72 fm. level, where the ground is favourable. In the 72 end, north of this shaft, the lode is large, and worth 5*l.* per fm.; in the south end the lode is 3 ft. wide, and worth 6*l.* per fm.; we have commenced rising in the back of this level against the winze sinking under the 62, where the lode is worth 8*l.* per fm. In the 62 end north the lode is still large, and worth 18*l.* per fm.; there is no change in this level south; the stopes in the back of this level are yielding a fair quantity of ore; the lode in the winze sinking under this level is worth 10*l.* per fm. The ground, in sinking Trelawny's shaft under the 52, is still hard; the lode in the 52, north of this, is worth 6*l.* per fm; the stopes in the back of this level are producing more ore than I have seen there for some time. The stopes in the back and bottom of the 42 are looking well since the last report. Smith's shaft is sunk 3 ft.; the water is draining slowly; the lode here is worth 10*l.* per fm., and fair ground. In the 30 end, north of this shaft, the lode is 2 ft. wide, composed of hornspar and can, with stones of lead. The tributers throughout the mine are earning fair wages. We sampled, on the 17th inst., a parcel of ore, computed 98 tons, to be sold on the 26th inst.

WHEAL VINCENT.—Capt. J. Spargo (Feb. 22) reports—The men in the lobby are getting on with good speed; they will soon complete it, if the ground continues favourable. The south lode is just as last reported on; but the ground is much softened. We are getting on with our rods, wheel-pit, &c., as fast as possible.

[From the *Plymouth Journal.*]

WHEAL ASH.—The lode in sinking the shaft has increased in size since it was last inspected, and continues to hold out the most flattering expectations.

PLYMOUTH WHEAL YEOLAND.—The lode in the diagonal shaft is widening to the north of the present workings. The lode above the slide, in the 34 fm. level, will probably be cut in the course of a week. The new south lode continues to hold out the most promising indications, and there can be little doubt that this lode alone will in depth turn out a very profitable speculation.

WHEAL ANDERTON.—The lode in the 90 fm. level, will be cut very shortly, and every indication above that level has been of late satisfactory.

WHEAL CALSTOCK.—A decided improvement has taken place in the 50 fm. level west. A south lode, about 2 feet big, is coming into the level, and will form a junction with the leading from both lodes, and the ground is very good for driving.

CALSTOCK UNITED.—The last batch of tin sold from these mines made 46*l.* per ton In consequence of the improved quality of the lode, and the rise in the price of tin, the tributers are working the pitches at a very reduced rate.

WHEAL PROSPER.—This new concern, situate in the parish of Peter Tavy, east of Wheal Friendship, has a very good lode in the end, and also in the stopes in the back and in the bottom of the adit level. One great feature in the sett is, that it possesses abundance of water-power for working machinery, and an inspection is particularly invited.

WHEAL FRANCO.—The lode in the 62 fm. level has improved since our last report.

DRAKE'S WALLS' samplings for the past month amount to 20 tons of tin, a great portion of which valued 53*l.* per ton. The next month's parcel will be 25 tons.

RIX-HILL.—There has been an improvement in the mine during the past week.

PLYMOUTH WHEAL YEOLAND EAST.—This lode has been cut through at the adit level, and is in its character very promising. It is necessary that some arrangements should be immediately made for sinking an engine-shaft to intersect this lode at 10 or 15 fms. under the adit, if not at a deeper level. This may be done for a very small outlay by arrangement with the adventurers in Plymouth Wheal Yeoland, most advantageously to all parties, but if the present advance in tin be neglected, the mine must suffer.

THE BIRCH TOR AND VITIFER MINES.—The cross-cut is progressing well. The bar of hard ground is cut out. The lode in Prideaux has never been better than it is at this time, and the lode in the Old Vitifer is still more valuable. There has been great enquiry for shares both here and in London during the past week, but we understand that only 30 shares have changed hands. A great interest is naturally excited by the cutting of a rich lode, under workings by the ancients, which extend two miles.

Tallow candles were first used in 1290, but wax candles were previously used in churches. The ancients burnt oil or naphtha in lamps.

MINING IN WALES.

BODCOLL MINE.—Captain W. Hancock (Feb. 23) reports—The cross-cut from the deep adit south is driven 3 fms., but as yet nothing more is seen than the branches discovered when Capt. Bryant was here; and it is advisable to drive a cross-cut north, as it is evident a part of the lode is still standing, which ought to be proved. The stope, or crosscut, in the shallow adit is now extended to the north wall of the lode, where I am glad to find there is a course of ore, worth about 7 or 8 cwts. per fm., and it appears to be going down well in the bottom. I think the ore ground standing in the eastern part of this level should be stoped away at once, and the end driven, as by driving 6 or 8 fms. we shall hole to a shaft sunk by the old men, where several tons of ore were raised.

BWLCH CONSOLS.—Capt. Matthew Francis (Feb. 19) reports—We are hindered at present in our dressing from the breakage of the roller of the crushing-mill, which was reduced by wear very thin before it broke. We should have got to work to-day, but could not get the trusses for the bearers of the roller-axles, ordered three weeks ago, at Aberystwith, delivered. The course of ore in the 15 cross-cut is very good; we are not certain that there is not ore still further to the southward, and shall continue the cross-cut some small distance further in that direction. The 25 west (about 7 fms. west of this discovery) is in a very good course of ore. The other bargains in the mine are without any alterations worthy of notice.

BRYN-AR-IAN SILVER-LEAD MINE.—Our setting was on Saturday last. The engine-shaft was set to be sunk under the adit level to six men, and the winze west of the shaft to four men; the adit east to two men, and the water-course to be brought in for 300 fms. in length. The adit level is now extended on the length of the lode for 35 fms., and will produce from 15 cwts. to 3 tons of lead ore per fm.; in my next report, I will describe the produce of the several bargains. We have about 10 tons of lead on the surface of the mine, and the crusher is ordered as directed.

CEFN GWYN MINE.—The agent (Feb. 19) reports—The adit level east looks much as usual; the lode is large and strong, with a leader 2 ft. wide, producing good saving work. The adit level driving into the western hill is much the same as last reported—a large promising lode, composed of friable spar, interspersed with a little lead ore.

CWM ERFIN MINE.—Capt. J. Bryant (February 19) reports—In compliance with your request, I have visited this mine, and carefully examined the lode in every part explored under the adit. I understand from Capt. Nicholls, there were shallow adits driven into the hills, where the lode is chiefly taken away, and if reports are true, yielded a great quantity of ore. The engine-shaft is sunk 20 fms. under the adit, on the course of the lode, which underlays south about 18 in. in a fathom.; the shaft being on the north part, where the lode not being productive, a cross-cut was driven south, and proved the lode to be 18 ft. wide, chiefly composed of compact slate, with stones of lead on the south part; and where the level is driven east 12 fms., the lode in driving the end the last 4 fms. is very large, containing stones of lead, but not enough to put a value on it. However, judging from the nature of the lode in the end of the run of ore ground in the upper levels, I should expect an improvement here shortly; 4 fms. behind the end, there is a stope in working, in the back of this level, 5 fms. long, where the part of the lode carried is 6 ft. wide, composed of compact slate, quartz, and mundic, with veins of lead throughout, yielding 15 cwts. of ore per fm. This level is driven west, on the south part of the lode, 10 fms., where it is unproductive; and, having a good lode in a sink, in the 10 fm. level, about the same distance from the shaft, on the north part of the lode, a cross-cut is driven west from the end, where the lode is 18 feet wide, of much the same character as in other parts of the mine, with a little lead on the north part, and where a rise is being put up to hole to the sink under the 10 fm. level—this rise is poor at present. The 10 fm. level is driven west about 20 fms., the end is poor; but, reports say there is a branch of ore gone down in the bottom of this level, 8 fms. long, which is stoped 7 ft. deep; this I could not see, from its being full of water, but will be proved shortly by the rise in the back of the 20, which will be holed to the sink; this level is extended east 114 fms., and from the ground taken away in the back, I should judge there are some good bunches of ore gone down for a considerable length. There are three stopes working in the back of this level, yielding, on an average, 8 cwts. of ore per fm.; there is a great quantity of ground standing in this part of the mine, and not being expensive to work, I should think would pay well. You may see by the section (in Mr. T. P. Thomas's office), that there are three shafts sunk, the two engine-shafts are 50 fms. apart; the eastern one is also sunk on the course of the lode to the 20, and a level driven west 4 fms.; this I could not see, being full of water to the 10 fm. level. A large water-wheel is now erecting, which is intended for pumping the water, and also drawing the ores, attle, &c., from both shafts. When you get this into operation, it will facilitate the workings considerably, inasmuch it will enable you to lay open double the quantity of ground in the same time. The eastern shaft being 50 fms. east of the eastern engine-shaft, and being also under the course of the lode, will serve for a whim-shaft if required; the eastern end, in this level, is driven 14 fms. beyond the whim-shaft, where the lode is poor at present. I would advise driving this end after the drawing machine is got to work, and as you have the water-wheel nearly in order for pumping, you would do well to get the drawing machine erected immediately, and save the expense of drawing the stuff by horses, which, no doubt, you find expensive. You will also require to extend the dressing-floors; this being done, and the mine fairly laid open (which will take the greater part of 12 months to do), I should think, with economy, there is every prospect of your having an extensive and profitable mine.

PENCRAIG-DU AND CAENANT.—Capt. M. Francis (Feb. 19) reports—The adit level in Pencraig-du, continues in a very good orey lode; the ore is mixed with the unproductive vein stuff for a width of 3 ft., and yields about a ton to the fm. At Caenant, the stopes at the top of the rise, are yielding a little ore; but the best ore ground is about 3 fms. further eastward, and which we are stoping towards, as the cheapest way of laying it open.

GREAT POLGOOTH MINE.—We understand that this mine is equalling the most sanguine expectations of the proprietors. At the ensuing meeting, to be held in a few weeks, it is believed that another dividend of 3*l.* per share will be declared, in addition to one of 2*l.*, paid about a month ago. The great rise in the price of tin must have increased the value of this mine very considerably.

CARADON COPPER MINE.—In our report of the meeting of adventurers, held on the 7th inst., in last week's Journal, there is an error in the amount of the balance due the purser, which we stated as 54*l.* 17s. 10d., the arrears of calls being 190*l.*; it should have been—amount due purser, 244*l.* 17s. 10d.; arrears of calls due, 91*l.* 2s. 4d.: leaving balance against the adventurers, 153*l.* 15s. 6d. The following is an abstract of the report of Capt. W. Rule, read at the meeting:—Since the last meeting, the lode looks more promising and more indicative of something profitable to the shareholders than at any other time since its commencement. The 30 fm. level, east of Moorshead's lode, is from 4 to 8 feet wide, composed of spar, peach, prian, mundic, and excellent stones of black and yellow ore. The same lode west is from 4 to 6 ft. wide, of much the same composition; 4 fathoms have been driven on in the back, and some good saving work broken. We have intersected the south lode, and driven 14 fms.; it is composed of peach, spar, prian, mundic, and occasionally stones of ore. From the appearance of the lodes, the improvement in the last 10 fathoms, and the fine stones of ore raised, I think our prospects are highly flattering. I should recommend to commence sinking the engine-shaft immediately; and with a little more outlay, I have no doubt we shall rank with some of the good mines in the neighbourhood

POWER TO SELL A MINE SHARE PLEDGED AS SECURITY—VICE *v.* TWEEDY AND OTHERS.—In the Stannaries court on the 7th inst., this case came on for hearing, and caused much interest. The petition was for the recovery of a share in North Pool Mine, which having been deposited by plaintiff with defendants, who were bankers, as security for money owing by him to them, had been sold, as he alleged, without his consent, and at less than its value. The petitioner submitted that the defendants ought to be compelled to purchase another share for him, inasmuch as a share was worth much more to him than the highest market price thereof; it being the usage of the Stannaries to allow merchant shareholders to supply mines with necessary materials in preference to other merchants, and prayed that he might be declared entitled to redeem the conveyances and shares deposited with defendants, he being ready to pay what might be due on his account, and that, at the option of the petitioner, the defendants either be decreed to purchase and transfer another share, or be charged in account with a sum equal to the highest market price at which a share in the mine might have been sold at any time since the 18th September, 1848. Mr. Hoskin having addressed the court at some length for the plaintiff, and given in, as evidence, much correspondence between the plaintiff and defendants, Mr. Roberts addressed the court for the defendants; he concurred in the general doctrine laid down by Mr. Hoskin, and in the cases cited, but he believed there was a very wide distinction between these cases and that now before the court, which concerned a mining share. He need hardly observe that a mining share was a property of a very peculiar description, and of a very fluctuating value. Strictly speaking, it could neither be considered land, nor goods and chattels; yet to some extent it might be looked upon as an interest in land, and might be regarded very much as a species of trade. He did not mean to say there might not be some understanding between the parties, which would subject defendants to some sort of liability in equity. He admitted that shares were very valuable to merchants on account of supplies to mines, and also for credit and reputation in business. Mr. Roberts then analysed the correspondence, and contended that from the repeated notices given the plaintiff, and from his own replies, the defendants were justified in the sale of the share in question The Vice-Warden in delivering judgment, said, there appeared no doubt that the transfer of the share in question was for the purpose of securing a debt due from plaintiff to defendants, and a power of sale might be implied, if the dealings of the parties allowed of that implication; the subject matter in the case was what was termed a "mine share;" and although it might be assumed that it had been assigned to defendants by perfect conveyance, it was not real estate. This was decided by the Lord Chancellor, in the case of Curling *v.* Flight, as an appeal from a decision of Vice-Chancellor Wigram, in 1848. The assignment of a share in a mine could not, under the circumstances of the present case, or perhaps in any case, be treated as a mortgage of real estate. The fluctuating and transitory value of this sort of pledge, furnished a sort of right in the holder to sell, should the pledgor neglect to redeem it, and he could only complain on the ground of haste or surprise. In the present case the right to sell was not left to implication, but appeared from the circumstances shown in the correspondence between the parties. From those, and the acts of the parties, it might reasonably be inferred that such right was recognised; and he thought such right had not been unduly exercised by the defendants. He could see no evidence to show that the deposit of deeds negatived the defendants right to sell the shares; he was of opinion that this deposit was made in consideration of defendants allowing his debt to increase. His honor then recapitulated the whole of the evidence, from which he deduced that the defendants had authority to sell; that they had sold, and that such sale could not be negatived by the plaintiff. It appeared to him, therefore, that defendants were justified in this sale, and as the prayer of the petition was grounded entirely on the supposed illegality of sale, the petition must be dismissed. There was nothing in the circumstances of the case which would allow him to say that the rule as to costs should be different to other cases, and the costs must, therefore, follow the event.

BAROSSA RANGE MINING COMPANY.

A special general meeting of shareholders was held, at the office of Messrs Coode, Browne, and Kingdons, Bedford-row, on Wednesday, the 21st inst., to elect two new directors, and to determine upon future operations, with a view to concentrate the means of the company, so as to bring about a favourable result at one of their mines at the earliest possible period.

JOHN BROWNE, Esq., who was in the chair, read the various reports which had been received from the colony since the last meeting, and from which it appeared that, at Greenock Creek Mine, though holding out great promise of ore in depth, it required machinery to get it; at Lynedoch Valley, in the land held from the South Australian Company, a shaft had been sunk 10 fms., and then stopped by water. Above the water-level, however, 20 tons of rich ore, yielding from 15 to 50 per cent. of copper, and 3½ ozs. of gold per ton, had been raised, and was getting ready for shipment. In the adjoining section, held by the company from Mr. Angas, and through which the lode passes, a shaft had also been sunk, and a lode found, 40 feet wide, and consisting of a gossan, which was considered a most favourable indication for ore beneath.

These particulars gave great satisfaction to a very full meeting, and it was resolved to send out at once a steam-engine and 1500*l.* in cash, and to concentrate the works to the full development of Lynedoch Valley. To do this effectually, the directors considered it would take about 2800*l.*, and which sum they were prepared with (having near 3000*l.* in hand out of the last call), without asking any more from the shareholders for 12 months at least, before which time they confidently hoped returns would be made. The new directors elected were F. Heath, Esq., of the Stock-Exchange, and Dr. Wotton, the board now consisting of G. Fife Angas, Esq., John Rundle, Esq., John Browne, Esq., Dr. Wotton, and F. Heath, Esq. The local directors being J. H. Angas, Esq., Mr. Randall, and Capt. Rodda. The former, however, being about to retire, and Mr. G. F. Angas having stated to the meeting that he was about to proceed to Australia, he was unanimously requested to act, on his arrival, as one of the local board, and which he consented to do.

In the course of an address to the meeting by Mr. ANGAS, he stated that, from letters he had received from his son, he was glad to find that smelting was in active operation in the colony by one or two companies, and would be of great importance to the mines; whilst a railroad was also about to be made from the port to the Burra Burra Mines, which would pass within four miles of Lynedoch Valley.

Before separating, a vote of thanks to the directors was proposed by Mr. LEA, and seconded by Mr. CARTER, in a neat speech, in which he stated he had attended numerous meetings of different companies, but never one where information was more lucidly and satisfactorily laid before the shareholders.

FOWEY CONSOLS MINING COMPANY.

We have been favoured with an abstract of Fowey Consols accounts for four months, to end of Dec. last, by which we perceive there is a balance against the adventurers in the course of that period of 190*l.* 0s. 11d. This, however, is not a loss, as there are withheld from sale from 200 to 300 tons of ore, of a low produce for copper, until a better standard can be obtained, and which, even at their present value, will more than doubly cover the foregoing balance. These accounts show—Labour cost and merchants' bills for Sept., 2859*l.* 13s. 6d.; ditto Oct., 2858*l.* 8s. 1d.; ditto Nov., 2885*l.* 17s. 5d.; ditto, Dec. 2903*l.* 12s. 1d. =11,507*l.* 11s. 1d.—By amount received for 24 parcels copper ore, 10,861*l.* 6d.; materials sold, 262*l.* 19s. 2d; sundries, as per cost-book, 193*l.* 5s.; leaving balance of loss, 190*l.* 0s. 11d.; to which add 67*2l.* 2s. paid to Mr. Thos. Field as his share of balance and materials, on accepting his relinquishment of 18 shares, as per resolution, equal to 862*l.* 2s. 11d., which deducted from balance of last account (6872*l.* 1s. 8d.), leaves balance carried to next account, 6009*l.* 18s. 9d.

The mine now consists of 494 shares, instead of 512 as heretofore, Mr. Field's 18 shares having merged, and become the joint property of the adventurers. The mine is, upon the whole, looking very well, but it will require at least 12 months from the present time to complete the chief workings now in progress, by extending a deep level from the centre of the mine to the eastern part, where good discoveries have been made, but of which advantage cannot be taken until such communication be effected for the purpose of having another shaft and steam drawing-engine to bring the increased returns of ore to surface; after which, with a continuation of present prospects, a fair hope may be entertained of realising profits from future operations.

COOMBLAWN MINING COMPANY.

A meeting was held at the mine, on the 14th inst., of Capt. Lean, of Holmbush, Mr. Serjeant, the purser, Captain Hosking, and other parties interested, to discuss the question whether further water power should be obtained, or a steam-engine be erected, when it was decided that the latter was the only plan by which the mine could be effectually developed. Capt. Lean's report has since been received by the committee, recommending that an engine of not less than 30 to 40-in. cylinder, with 8-ft. stroke, be erected close by the old engine-shaft on the main copper lode, and that flat rods be carried to the new engine-shaft, the latter being sunk 20 fms. below the surface, and the two shafts being 112 fms. apart, the object being to sink 60 fms. in depth, to prove a parallel lode to the Callington Mines for silver and lead; and by driving the proper levels, to develope the four lodes contained in the set, believed to be rich in copper, lead, and silver lead ores. Capt. Lean thus concludes his report:—"If you adopt my advice, I think a fair trial can be made of all the lodes, and I hope to your satisfaction, and remunerate you for the outlay required; and if we are allowed to form an opinion of the discoveries already made, and the work that has been raised from the lead lode, also the indications of the caunter lode at surface and shoal level, and the large east and west copper lode—not forgetting the nature of the country, and the locality wherein situated—I call it a promising adventure, and as such should be prosecuted forthwith.

STRAY PARK, CAMBORNE VEAN, AND WHEAL FRANCIS MINING COMPANY.

A general meeting of shareholders was held at the mines, on Friday, the 16th inst. N. VAWDREY, Esq., in the chair.

The accounts, showing a balance of 62*l.* 13s. 6d. in favour of the company, were examined and passed:—By sales of copper ore, Dec. 7, 1784*l.* 6s. 10d.; balance in hand, 399*l.* 8s. 7d.=2183*l.* 15s. 5d.—To tutwork cost, Nov. and Dec., 607*l.* 3s. 7d.; merchants' bills, ditto, 232*l.* 7s. 2d.; tribute paid on ores sold 7th Dec., 237*l.* 1s. 9d.; subsist advanced on ditto, 34*3l.* 6s. 6d.; dues payable on ditto, 74*l.* 6s. 11d.; Stray Park adventurers' proportion of Wheal Francis cost, Nov. and Dec., 67*l.* 16s: leaving balance in hand, 63*1l.* 13s. 6d.

The following report, from Capts. R. Eustice and E. Ralph, was read:—

Feb. 16.—In the cross-cut, driving south at the 56 fm. level, at Wheal Francis, the ground has become much harder during the last month, and, consequently, we have not yet intersected the lode. In the 56 fm. level, on the Town lode, we are rising up to communicate with the 46 fm. level, and which we hope to accomplish in the course of another month. When this communication is made, the 56 fm. level will be well ventilated, and we shall then continue the cross-cut north in this level, to the extent of Camborne Vean sett. In the 80 fathom level, driving west, at Wheal Francis, the lode is 30 inches wide, yielding 2 tons of ore per fm. In the 90 fm. level, driving west, at Wheal Francis, the lode is 15 in. wide, containing stones of ore. In the winze sinking below the 90 fm. level, at Camborne Vean, the lode is 2½ ft. wide, yielding 2 tons of ore per fm. In the 100 fm. level, driving west, at Wheal Francis, the lode is split into small branches, and at present is unproductive; in the winze sinking below this level, in Camborne Vean, the lode is 2 ft. wide, yielding 2 tons of ore per fm. In the 110 fm. level, driving west, the lode is 2 ft. wide, yielding 2 tons of ore per fm. In the 120 fm. level, driving west, the lode is 1 ft. wide, yielding 1 ton of ore per fm. In the 150 fm. level, driving west, the lode is 1 ft. wide, yielding 1 ton of ore per fm.; in the winze sinking below this level, the lode is 3 ft. wide, yielding 4 tons of ore per fm. In the rise above the back of the 180 fm. level, going up to communicate with the 150 winze, the lode is 9 ft. wide, yielding 3 tons of ore per fm.; in the same level, driving east, the lode is not yet clear of the cross-course, it will, however, yield two tons of rich grey and yellow ore per fm., and has a very promising appearance; in the same level, driving west, the lode is 3 ft. wide, yielding 4 tons of ore per fm; in this level we have now laid open a considerable quantity of profitable ground, but which cannot be worked away advantageously until the communication be made with the 150. We have commenced sinking Camborne Vean engine-shaft below the 180, and purpose carrying it down to the 200 fm. level, before driving cross-cut north and south to intersect the lodes. This work will require time and money to complete; but, with our present prospects in the bottom of the 180 fm. level, we are justified in confidently asserting, that Stray Park will not only be a durable concern, and beneficial to the lords, the merchants, and the miners, but that the adventurers will also, at no very remote period, again become participators in the fruits of our present labours. The tribute ground is looking very encouraging, and our next sampling bids fair to exceed the previous one, both in quantity and quality.

ACCIDENTS.

Ponty-pridd, Glamorganshire.—A man named Anthony Griffiths, a hitcher, in Mr Calvert's pit, met with his death in the following manner:—On the night of the 19th inst. during the time a tram of coal was drawing up the pit, the deceased, together with his partner, were doing something in the sump at the bottom of the pit, and the tram, in descending, came in contact with a part of the pit's side, thereby causing a stone to fall on the poor man's head, which killed him on the spot.

Clay Cross.—John Lomas, aged 67, was crushed between the chair and the side of the pit, and in that manner was dragged up 10 yards, when he fell, and was so much injured, that he died five days after the accident.

Bunn's-lane Colliery, Dudley.—As W. Campbell was cutting coal in a gate-road, about 2 tons of the mine fell from the roof and killed him.

Merthyr.—M. Evans was killed, by a fall of coal, in one of the Cyfarthfa levels.

Dreadful Coal-Pit Explosion at Rowley Regis.—We learn that another of those sad catastrophes which so frequently occur in the mining district of South Staffordshire, took place yesterday forenoon, about half-past 10 o'clock, in one of Mr. Daniel Round's pits, known as the Henges Colliery, in the parish of Rowley Regis. An explosion of fire-damp took place in the pit while the men were at work; and three colliers of the name of Bate, father, son, and uncle, all living together in one house, were killed almost instantaneously. Although the pit is 200 yards deep, the explosion was heard at a distance of a mile; no blame is attributed to any one.—*Birmingham Journal.*

A Succession of Accidents.—On Monday afternoon, between four and five o'clock, a series of accidents befell workmen employed at the Victoria Pits, Dukinfield, the property of Messrs. Swire and Lees, by which five were injured, several of them in a serious manner. The usual complement of hands were employed, when the fruitful source of mischief and

of death, working with an unprotected candle, caused an explosion, by which two men were burned, but not seriously. About the same time a portion of the roof fell at a distant part of the pit, by which one man was caught, and his back badly injured—he was carried home in a cart. Within a few minutes of the last a third accident occurred; another portion of the roof of the pit fell in at a place some 700 yards from the other fall; two men were caught—one had his foot crushed, and the other man was badly hurt about the head and breast. The names of the sufferers are J. Tuley, J. Proctor, W. Wrexham, W. Brindley, and another known by the name of Jack Curley.—*Manchester Courier*.

Phœnix Mine.—John Harper was killed here by a kibble falling on him down the shaft through the breaking of a chain. This is the only accident which has happened at this mine during a period of 12 years.

Merthyr—The Tunnel.—A tunnel is in progress through Aberdare Mountain, commencing on the Merthyr side by Abercanaid, and opening on the Aberdare side, below the Werfa Colliery. The work has been contracted for by Mr. Sharp, under whose management no accident up till lately has taken place; but, unfortunately, on Friday, two men were severely hurt by a fall of earth. One poor fellow had both his legs broken; the other the loss of a leg. Both are doing well.—*Cambrian*.

Balsoon Consols.—At a meeting of adventurers, held at the mine, on the 9th inst., the accounts for the three months ending Dec. last were produced by the purser, John Roscorla, Esq., from which there appeared a balance against the mine of 226*l*. 8s. 4d. A call of 3*l*. per share was made.

East Pool.—The following is the statement of accounts, dated Feb. 20th:—Labour cost for Dec. and Jan., 882*l*. 14s.; merchants' bills, 355*l*. 1s. 5d. = 1237*l*. 15s. 5d.—By ores sold, Dec. 7th, 744*l*. 15s. 4d.; tin sold, Jan. 3d and Feb. 17th, 421*l*. 2s.—Less dues (1-30th) 38*l*. 17s. 2d.=1127*l*. 0s. 2d.—By two months' water drainage, 120*l*.; debts from tributers, 12s. 3d.=1247*l*. 12s. 5d.: showing profit of 9*l*. 17s.—Dr. balance last account, 145*l*. 1s.—leaves present Dr. balance, 135*l*. 4s.

Exmoor Wheal Eliza.—Capts. W. H. Whitford and Thomas Dunn report—Since our last, we have sunk the engine-shaft 3 ft.; we find the ground is hard and difficult to penetrate; the prospects of the mine, relative to the respective lodes, are as good as when we were sending off those splendid specimens which have excited so much attention in the public mind. We hope shortly to be in a position to report of having a good course of ore.

THE TAVISTOCK DISTRICT.

The progressive advancement of the mining market, the improved standard for copper, and the increased price of tin, recalls the attention of those engaged in developing this section of our national wealth to the various localities in which mineral in abundance has been found. Camborne, Redruth, St. Austell, Caradon, Callington, and Tavistock, are the most important districts in the west of England. In the two former nearly every lode has been tried; near St. Austell, Par Cousols, Fowey Consols, and West Fowey Consols, stands prominent as returning mines. Around the Caradon a great many mines have been opened within the last few years, and many of them have been worked, and still are working, to a considerable profit to the adventurers. Callington claims Holmbush and the Callington Mines, which have been highly productive, and the Heignston Downs, which at present stands in a very interesting and exciting position; Drake Walls, a profitable mine, and the old Gunnis Lake, which has produced *thousands* to her former fortunate adventurers; and Hawkmoor, which, at the present time, has a valuable course of ore. Crossing the Tamar, which here separates the counties of Cornwall and Devon, we come into the parish of Tavistock, to which district we venture to direct a few observations, from the important position which it at present occupies, by having the Devon Great Consols—a mine standing at the head of the list, and sending into the market her 1500 tons monthly. In this district, since the panic of 1825 (when all mines not paying their own cost were abandoned), no mines have been prosecuted to any considerable depth with the exception of Devon Great Consols, Wheal Friendship, Bedford United, Wheal Franco, Tamar Consols, and East and South Tamar. But there are many very large and highly-promising lodes opened on the backs, which will, doubtless, if vigorously worked, prove remunerative to the adventurers interested. It is with the desire to warn the prosecutors of these mines against the reiterated and oft times fatal mistake of paying too much attention to surface operations, which induces us again to refer to this most interesting district, the lodes in which are often from 5 to 10 ft. wide, with gossan on the backs, and their courses of mundic, spar, and peach. That mundic "rides a good horse," is an old and a true proverb, but that mundic sits firmly in the saddle is equally true. In this district, it appears to us, at least, that the proper course to adopt, in 99 cases out of every 100, would be to sink an engine-shaft 40 or 50 fms. from surface, and at this depth to intersect the lodes. This, in many cases, obviates loss to original shareholders, who frequently become weary, and sell their shares if kept long in suspense, and without having a *definite object in view*. We trust that these brief remarks may have their due weight with the captains of mines as well as the adventurers, and we feel confident that there are many prizes yet to be drawn in this district; perhaps but little inferior to the Devon Great Consols.

MINING IN NORTH CORNWALL.

It may, perhaps, be within the recollection of many mining adventurers o the present day, that the miners of the western districts announced the utter impossibility of any remunerative mining operations being carried out in the eastern parts; this erroneous idea has now happily been exploded, by the development of some of the richest mines in the county, the Caradon and Wheal Maria districts forming the principal points of success. Such, then, being the case, there is not the slightest reason why the northern part should not participate in similar advantages, or, if it may not be found congenial for copper, other minerals, such as silver and lead, may equally reward the enterprise of the adventurer as the former. Many small mines have, at various periods, been commenced, and are still being feebly carried on; but none of them, save the North Treburget, near St. Teath, ever figured in the dividend-paying list, the reasons for which are obvious. The western miners, whom everybody used to believe, said they never could pay, the consequence of which was, they were never prosecuted with any degree of vigour—hence no effective results. During the past 18 months, however, several small mines have been at work, and in some of them the most promising discoveries have been made, which, if supported with capital, may, in a short time, become of great importance. A meeting of gentlemen in the City took place this week, to take the matter into consideration, the result of which was the appointment of Mr. C. S. Richardson, surveyor and civil engineer, to go down, and make a careful survey of some of the mines, to prepare plans and reports of them, and give practical estimates for carrying them out on a large scale. It may, perhaps, be as well here to remark, that Mr. Richardson has, for a long time, been endeavouring to introduce a series of mining improvements, which, if he should once effect, would tend greatly to dispel that fear of liability and loss which ever attend adventurers taking shares in mines. Although Mr. Richardson's surveys are entirely of a private nature, yet it is to be hoped he will not, in all cases, exclude the mining public from his opinions on mining property in this district.

We are happy to hear that a 9 ft. vein of coal has been struck at Aberam an by Mr. David Williams, of Yniscynon colliery, Merthyr.

A new vein of coal is stated to have been discovered in the Forest of Dean. Mr. Barton, on sinking a shaft to the depth of 50 yards, at Poolway Green, near Coleford, came to a vein upwards of 2 ft. thick, the coal of superior quality. During last year, 153,567 tons (long weight) were brought down the Severn and Wye railways, and shipped at the Lydney Dock.

Scarcity of Coal.—At this moment there is a scarcity of coal, resulting from the painful fact of so many labourers in the mines of the west country having been swept away by the destroying pestilence, and thereby greatly diminishing the amount of manual labour. Wages have risen in consequence, and coalmasters, we believe, have offered large sums for additional men. The miners generally are an intemperate class, and cleanliness by them has never yet been rightly prized. Sad has been the lesson taught them by the recent ravages of the scourge; we hope it may be as impressive, salutary, and lasting. —*Renfrewshire Advertiser* (Feb. 19).

The Landore Viaduct.—We are glad to announce that this magnificent viaduct, which is to be erected over the Swansea river, is now being proceeded with in a very spirited manner. A large number of hands are at present employed on it, and fresh ones are put on almost daily, so as to ensure its completion by the time the South Wales line will be opened from Newport to Swansea.—*Cambrian*.

Windsor Railway.—From the rapidity with which these works are proceeding, it is contemplated that the branch line will be opened for traffic in the course of the ensuing summer. The excavations between Slough and the Thames, at Windsor, over which an iron bridge will be erected, are fast progressing, as are also the works on the Windsor side of the river. There will be two entrances to the terminus at Windsor—one near the White Hart Hotel, in the High-street, and the other from Peascod-street; the occupants of the houses have just received the usual notice from the solicitors to the company.

Caledonian Railway.—From the statement to be submitted at the meeting on the 26th inst., it appears that the traffic receipts for the half-year, ending 31st December last, amounted to 130,968*l*.; and the charges, including rents, interest on loans and on preference shares, 99,061*l*.—leaving a balance of 31,907*l*., to which the balance of last account, 21,809*l*., is added, making a disposable balance of 53,316*l*.; out of which the directors recommend a dividend on the ordinary share capital of the company at the rate of 3 per cent. per annum, which will leave a surplus of 15,641*l*. The average weekly receipts during the half-year amounted to 5037*l*., being nearly at the rate of 200*l*. per mile per annum. The working expenses are stated to be 41 per cent. on the receipts. The capital account to the 30th of December last shows that 4,307,530*l*. had been received, and 4,865,104*l*., expended, leaving a balance against the company of 557,603*l*. It states that they are authorised to raise 982,026*l*. by shares, and 209,000*l*. by loan, and that the capital of the company is sufficient to meet all engagements, and finish all works now in progress of construction.

NEW REAL DEL MONTE MINING COMPANY.

The dissolution of the Real Del Monte Mining Company, by resolutions passed on the 25th of September last, and confirmed on the 30th of October, under circumstances over which the directors nor shareholders had the slightest control—except by raising more capital—will be in the recollection of our readers; as also that it was then stated, several influential capitalists were ready to undertake the formation of a new company to work the mine on an entirely new system, believing that there was yet much mineral wealth on the property, and that large profits might be made. A notice of a meeting, to be held at the George and Vulture Tavern, on Tuesday next, appears in our advertising columns this day, and we have received a preliminary prospectus of a new company, to be carried on under the title of the New Real Del Monte Mining Company. It is proposed to raise a capital of 100,000*l*., in 20,000 shares of 5*l*. each; 40,000*l*. of this sum will be required to purchase the rights, interests, and property of the old company, which are, doubtless, worth considerably more, and thus enable the new company to commence operations, with full possession of all the buildings, machinery, steam engines, stores, and materials of every description, which will greatly facilitate future operations. From the latest advices from the mines, it appears that the stoppage of the deep drainage had reduced the expenditure one-half, that Santa Ynez had greatly improved above the water level, and a vast field of mining ground still remained unexplored; while, in most of the bottoms under water, ores of rich quality had been left; and under all the circumstances, it is estimated, by parties the most competent to judge, that the remaining 60,000*l*. will be ample for completing the necessary works, by which the prosperity of the company may be secured; and in order to drain the mines effectually, and at a greatly reduced cost as compared with previous methods, an adit of great length, called the "Aviadero," has been slowly driven by the old company, and the end is now at a point within 800 yards of the mine of Moran, which is known as a highly productive mine, and which, in 1847, was a profitable one; this, in its progress towards Moran, would intersect several large and highly promising veins, on which it is highly probable important discoveries will be made; and from Moran this adit may be continued through other veins of known extent and greatness, greatly facilitating the working of a vast extent of ore ground, thus laid open. This adit would explore some of the finest veins in the district, and leave all above it unincommoded by water, and render accessible some of the mines on the Biscaina vein, which, although under water, might, with some assistance from the steam-engine, be brought into profitable operation. The new company, commencing under renewed credit and most favourable auspices, and by limiting the operations to the extraction and reduction of the ore, the undertaking will pay its way—the weekly produce and cost being from $5000 to $6000 weekly; while for a small outlay, about $500 dollars weekly, several promising trials might be continued on the Biscaina, Santa Brigida, Santa Ynez, and Tapona veins, of which large portions still remain totally unexplored.

A requisition to the mayor is already numerously signed at Newcastle-on-Tyne for a public meeting, to take into consideration the propriety of legislation in the affairs of mines, according to the recommendation of the jury and witnesses at the late inquest at Darley Main Colliery.

Cameron's Steam-Coal Company.—Press of matter has prevented ou. hitherto publishing any report of two trials in the Queen's Bench (the Company *v.* M'Adam) which took place on the 1st instant, and were for the two first calls, of 2*l*. each. In the first of these causes, the defendant called no witnesses; but, in the second cause, it having been intimated that defendant wished to ask Mr. Elderton, the company's solicitor, some questions, that gentleman volunteered his evidence, when the jury immediately, after a short suming up from Mr. Justice Erle, returned a verdict for the plaintiffs for the full amount of principal, interest, and costs.—Mr. Martin and Mr. Atherton were counsel for the plaintiffs, and Mr. Phipson for the defendants.

Coal Mining in the Forest of Dean.—We understand that the coal trade in the Forest is in a flourishing condition, and that the value of mineral property is increasing. An extensive and valuable coal-field is to be offered for sale [see our advertising columns], at the Bell Inn, Gloucester, on the 10th March next, consisting of three of the most important workings in the district. They are admirably situated, having the Severn and Wye Railway intersecting them, through which they will undoubtedly command a ready sale for any quantity of coal which can be raised; and as the branches of the South Wales, and Monmouth and Hereford Railway, which will shortly be proceeded with, pass within a few yards of the collieries, their value must be very materially enhanced. We should imagine this property to be well worth the consideration of capitalists, as promising a realisation of the speedy return of capital, with a certain and considerable income.

Ramsay's Newcastle Cannel Coal.—In the *Mining Journal* of the 23d December last, we noticed the discovery of a bed of Cannel coal at the Blaydon Main Colliery, about four miles from Newcastle-upon-Tyne. This coal, according to elaborate reports by Dr. Leeson, of St. Thomas's Hospital, Dr. Miller, of King's College, and Dr. Fyfe, of Aberdeen, is most admirably adapted for the manufacture of gas—being free from sulphuretted hydrogen and other impurities; 100 parts by weight produce 70 parts of excellent coke—but, in bulk, 100 parts of coal produce 145 of coke. The gas produced, with a flame 3½ in. high, in a burner containing 24 apertures in a circle, ¾-in. diameter. In one experiment, 3·44 cubic feet per hour were consumed; in a second, 3·66; and in a third, 3·55 cubic feet per hour. Its specific gravity is from 554 to 580, and its illuminating power when tried by the chlorine test, on an average of a number of trials, was 12·5. The quantity of gas yielded by one ton of this coal, on an average of several trials, was 9746 cubic feet.

Passengers' Signal-Lamp.—Mr. Hattersley, of Ratcliffe-highway, has recently registered a simple and ingenious signal light for railway carriages, by the use of which a signal may be given by the passengers inside a carriage to the guard, or attendant, on the outside, whenever urgent necessity may require a communication to be opened between them, such signal light being applicable also to other uses. An opaque cylindrical casing is to be affixed to the outside of the roof, or top, of a railway carriage, and upon this a transparent lanthorn is to be secured; within the cylindrical casing is placed a tube (fitted to and passed through the roof of the carriage), threaded at its upper part, to allow a screw collar being secured to it, in order to fix it in the proper position; there is an inner tube sliding up and down within the first-mentioned tube, in the manner of a telescope, having a cap, or top, attached for carrying a lamp. An annular plate attached to the tube prevents the tubes from falling into the carriage. When not in use, the inner tube is drawn down into the first-mentioned tube, which will bring down the lamp from its position in the lanthorn into the cylindrical casing, and cause its light to be hidden from view; but when it is required to signalise the guard, the person desiring to give the signal has to push up the inner tube by the handle attached to it, when the light will be fully exposed to view, and give the desired signal.

Improvements in the Manufacture of Iron.—The *Mechanics' Magazine*, in noticing the patent of Mr. Richard Shaw, Gold's-green, West Bromwich, Stafford, railway-bar finisher, "for improvements in the manufacture of iron into tyre bars, round bars, square bars, and flat bars, T bars, angle iron, and trough iron," says, the invention sought to be secured under this patent, consists in employing curved bars to form the outsides of the piles out of which the angle iron or trough iron, tyre bars, flat bars, round bars, and T bars are to be rolled, in order to prevent their lamination. The bars are rolled into the required curved shape by suitably grooved rollers.

Railway Taxation.—We are happy to find that the present anomalous system of rating railway property to local taxation is exciting attention among influential bodies. An important meeting has been held at Birmingham during the past week, at which resolutions were passed, strongly expressive of the general opinion. We have an article in type, on a pamphlet by Mr. Laing, chairman of the Brighton Railway Company, which shall appear in our next.

Western Valleys Railway.—We understand that the contract for the general supply of carriages, for this intended railway, has been taken by Messrs. Smith and Milley, of Liverpool; and that for the locomotive engines, by Messrs. Sharp, Brothers, the manufacturers, of Manchester. The alterations along the line are being rapidly effected, and Messrs. Rennie and Logan, contractors for the station and terminus in this town, are making the necessary arrangements for completing their department by the 1st of August.—*Monmouthshire Merlin*.

Western Australia.—We have accounts from this colony to the 6th of November, received *via* Batavia. The mining prospects of the colony still occupied a share of public attention; a large sum had been expended in mining operations, and at a meeting of the shareholders it was proposed to extend the works, but it was ultimately decided to keep them in abeyance until a report of the extent to which Western Australia was a mineral country should be received from Mr. Menge, an experienced mineralogist at Adelaide. The best specimens of copper ore had been obtained from Victoria Plains.

The Salt Tax in France.—It will be remembered, that it was calculated that the reduction on the duty on salt would produce a loss to the Treasury of upwards of 60,000,000 of francs. The Minister of the finances has just published a statement, from which it appears that, comparing the receipts for the month of January of the present year with that of 1848, the loss has been greatly exaggerated. If the receipts for the remaining months be equal to the first, the loss will not be above 2,000,000 or 3,000,000.

THAMES TUNNEL COMPANY

The number of passengers who passed through the Tunnel in the week ending Feb. 17 was—No. of passengers, 18,898.—Amount of money, £78 14s. 10d.

CURRENT PRICE OF GOLD AND SILVER.

Foreign gold, in bars .... per oz.	£3 17 9	New dollars ..... per oz.	£0 4 10
„ Portugal pieces	0 0 0	Silver in bars (standard)	0 4 11½

EXPORTATION OF THE PRECIOUS METALS.—The following are the official returns of the exports of gold and silver from the port of London for the last week:—Silver coin to Rotterdam, 7000 ounces; ditto to Calais, 150,000; ditto to Havre, 368; ditto to Belgium, 3000—Silvers bars to Rotterdam, 174,000; ditto to Hamburgh, 69,603; ditto to Belgium, 155—Gold coin to Belgium, 350; ditto to Havre, 1511.

DUISBURG IRON-WORKS AND MINES, in WESTPHALIA, CLOSE TO THE RHINE.

MANAGED IN ENGLAND ON THE COST-BOOK PRINCIPLE.

The demand of the North-Western States of the Zollverein for pig-iron smelted with coke requires an annual importation which, in 1846, exceeded 100,000 tons of that metal. Its present average current price, in Westphalia, inclusive of duty, is, per ton £5 16 0

Being possessed of extensive mines of iron ore, *entirely paid for*, the Duisburg Company proposes to turn out this year only 150 tons of pig-iron, made with coke, per week, which, owing to circumstances peculiarly favourable as to minerals, fuel, and carriage, can be produced at a cost, per ton, not exceeding 2 0 0

Thus leaving for division among the holders of the 3000 shares, in which the capital stock is divided, a *net profit*, per ton, of £3 16 0

Or £9 per share of £15.

Every further information to be obtained, and specimens inspected, at the company's offices in London, 28, Moorgate-street.

VALLEY OF LOETCHEN SILVER-LEAD MINING AND SMELTING COMPANY.

These MINES are situate in the above-named VALLEY, near TOURTEMAGNE, in the Canton du Valais, SWITZERLAND, and were granted to M. Pierre de Baglioni, by a concession of the Government of that canton, dated Sept. 8, 1845, for 30 years thenceforward. The mines, their plant, machinery, materials, erections, the minerals already raised (amounting to upwards of 2000 tons of silver-lead ore), and all other the properties thereof, with the contracts for timber, have, by deeds executed the 28th and 29th days of August, 1848, duly stamped and registered at Paris, been transferred and assigned by the said concessionaire, Pierre de Baglioni, to Gustavus William Blanch, Esq., of 3, Albion-place, Blackfriars-road, London, with full powers to form a public company for working the said mines and smelting the produce thereof, with a capital of £60,000, divided into 6000 shares of £10 each.

The said Gustavus William Blanch, therefore, hereby gives Notice, that the said PUBLIC COMPANY IS NOW BEING FORMED, and that a full prospectus of the same may be had by applying to him, or at the offices of the company, 37, Southampton-street, Strand, where all further information may be obtained. G. W. BLANCH.

Dated Feb. 15, 1849.

MEXICAN AND SOUTH AMERICAN COMPANY.—The directors of the Mexican and South American Company hereby give Notice, that, on Thursday, the 8th March, at Two o'clock, they will be ready to RECEIVE, at the company's offices, No. 10, New Broad-street Mews, TENDERS for the undermentioned SHARES in the said company, the call on which, due the 26th Oct., 1847, has not been paid.

Certificates of Five Shares each.

Nos. 67, 86 to 88, 98 to 100, 103 to 108, 129 to 132, 147 to 151, 173, 181, 210, 241 to 246, 499, 905, 926 to 930, 948, 2009 to 2016, 2029, 2032 to 2034, 2045, 2047, 2048, 2053, 2054, 2056, 2067, 2068, 2071, 2073, 2091 to 2094, 2109 to 2133, 2136, 2139, 2147 to 2152, 2156 to 2163, 2166 to 2168, 2187, 2188, 2191 to 2193, 2196 to 2198, 2201 to 2210, 2215, 2216, 2219, 2220, 2224, 2225, 2228, 2229, 2233 to 2236, 2239, 2241, 2243, 2244, 2246 to 2269, 2279 to 2281, 2307 to 2312, 2328 to 2331, 2333 to 2341, 2344, 2351, 2352, 2358 to 2361, 2364, 2365, 2368 to 2370, 2372 to 2427, 2430, 2450, 2471, 2473 to 2476, 2479 to 2481, 2484 to 2487, 2489 to 2498, 2515 to 2528, 2534, 2536 to 2550, 2563 to 2567, 2584, 2585, 2593, 2595 to 2598, 2610, 2619 to 2622, 2632 to 2637, 2639, 2644 to 2646, 2649 to 2655, 2697, 2702, 2709, 2743 to 3000.

Certificates of Ten Shares each.

Nos. 1013, 1023 to 1025, 1057, 1058, 1072 to 1074, 1078 to 1092, 1100, 1102 to 1108, 1111 to 1116, 1118, 1128, 1130, 1138, 1168, 1171 to 1180, 1182, 1193 to 1215, 1225, 1247 to 1251, 1253, 1256, 1260 to 1265, 1267 to 1269, 1272, 1273, 1286, 1298, 1303, 1305 to 1311, 1324 to 1326, 1328 to 1330, 1332, 1333, 1342 to 1365, 1460, 1463, 1465, 1466, 1468 to 1472, 1476 to 1480, 1492, 1495, 1509 to 1513, 1518, 1531, 1535, 1540 to 1545, 1557, 1560 to 1572, 1574, 1577, 1584 to 1588, 1592, 1597 to 1599, 1602 to 1605, 1618, 1621, 1629, 1630, 1631, 1645, 1670 to 1674, 1693 to 1715, 1720, 1723, 1744, 1747 to 1751, 1760 to 1766, 1775 to 1778, 1786, 1792, 1796, 1799, 1805, 1806, 1808, 1810, 1811, 1819, 1828, 1836, 1838, 1844, 1846, 1851, 1853, 1938 to 2000.

The form of tender may be had at the company's office.

H. W. SCHNEIDER, Managing Director.

10, New Broad-street Mews, Feb. 22, 1849.

SUBMARINE TELEGRAPH.—The GENERAL TELEGRAPH COMPANY INVITE all PARTIES INTERESTED in this important subject to INSPECT their SUBMARINE TELEGRAPHIC ROPE—the most perfect of the kind yet submitted to the public.

Offices, 9, John-street, Adelphi, London.

RIDER'S RAILWAY BRIDGE.—TO RAILWAY COMPANIES.—This BRIDGE has now been for 18 months in DAILY USE (having a double track) on the HARLEM RAILWAY, in the State of New York, United States. The Erie Railway and the Newhaven Railway Companies have likewise adopted it.

Several other bridges, for ordinary purposes, are also being constructed.

The advantages of this over all other iron bridges hitherto invented, consist in the small amount of iron required, compared with the strength obtained, in avoiding the use of any surplus weight of material, in the consequent economy of its construction, and also from its lightness, easy mode of putting together, and facility of transport, in its peculiar adaptation for foreign use.

As regards economy, it can be erected at a cost not exceeding that of a WOODEN BRIDGE, of equal capability.

Applications to be made to Mr. Moulton, the patentee, Bradford, Wilts; or to Mr Howard Jacobson, Suffolk-lane, Thames-street, London.

CUNNINGHAM AND CARTER'S NEW SYSTEM OF RAILWAY PROPULSION.—Railway Directors, Engineers, and the public generally, are invited to examine this system, which may be VIEWED on Mondays, Wednesdays, and Saturdays, from half-past Eleven to Three o'clock, at Ingram's Manufactory, 29, CITY-ROAD, near Finsbury-square.

CUNNINGHAM & CARTER'S NEW SYSTEM OF RAILWAY PROPULSION.

TO RAILWAY PROPRIETORS, ENGINEERS, and all other PARTIES CONNECTED with RAILWAYS.—J. T. CARTER will undertake to ALTER any LINE of RAILWAY, without impeding the present traffic; and BRANCH LINES may be CONSTRUCTED on this PRINCIPLE at ONE-HALF the COST on the locomotive system, while he will guarantee the working expenses at less than one-fourth.

Parties interested are requested to inspect the model, which may be seen daily, from Twelve to Three, at Ingram's, 29, City-road, where further particulars may be obtained.

CALIFORNIA—TO MERCHANTS, SHIP-BUILDERS, LORDS OF THE ADMIRALTY, AND CAPTAINS.—The WHEEL-RIGGED SHIP, PATENTED by J. BROWNE, Esq. This ship may have six masts, to be managed by 12 sailors—one-armed men, one-legged men, and some perfectly blind, so that, on arriving at California, they will not fly to the "diggings." The PATENT RIGHT TO BE SOLD.—Visiters to be received from Twelve o'clock till Five.

30, Great Portland-street, Portland-place.

CALIFORNIA—The BALLOON RAILWAY, PATENTED by J. BROWNE, Esq.—TO AMERICAN AND ENGLISH CAPITALISTS.—PROPOSED COMPANY, to be established, of the BALLOON RAILWAY, to go from WASHINGTON direct to any particular spot in CALIFORNIA—distance 3000 miles—under favourable circumstances, to be done within the three days. The expenses attendant on the fabrication of the Balloon Railway not to be 1-50th of the present cost, and travelling would be attended with less danger.—Visiters received from Twelve o'clock till Five.—30, Great Portland-street, Portland-place.

LOCOMOTIVE STEAM-CARRIAGE COMPANY, FOR PASSENGERS AND PARCELS ON TURNPIKE-ROADS.

Several Patents, with the view of carrying out this object, having been submitted, a PUBLIC MEETING will be CONVENED on an EARLY DAY, for the purpose of placing before the shareholders the same, and determining on the course to be pursued, of which due notice will be given. HENRY ENGLISH, Hon. Sec.

Parties having secured any patents, or having plans, are requested to communicate the same previous to such meeting being held.

Offices, 25, Fleet-street, Feb. 22, 1849.

ANDREW SMITH'S PATENT WIRE ROPE—NOTICE AND CAUTION.—The UNDERSIGNED begs to inform the Public, and especially the MINING, RAILWAY, and SHIPPING INTEREST, that he has become SOLE LICENSEE of Mr. ANDREW SMITH, for the MANUFACTURE and SALE of his PATENT WIRE ROPE; and that he has taken to the premises, late Mr. Smith's, at Millwall, Poplar, where orders will be executed with the utmost attention and dispatch, and on reasonable terms. WILLIAM WILKINS.

Patent Wire Rope Works, Millwall, Poplar, Nov., 1849.

CAUTION.—Persons PURCHASING, or USING, the PATENT WIRE ROPES, NOT MANUFACTURED by the above LICENSEE, are warned that they will be liable to be sued for damages as infringers of Mr. Smith's Patent.

PATENT MINERAL PAINT.—After three years' trial on the sides and bottoms of iron and timber-built ships, this PAINT has proved itself equal to copper as a protection from vegetation, as well as the sea-worm and all other adhesive matter. It is also peculiarly adapted for spouts and gutters, iron railing, felt or wooden roofs, tarpaulings, damp walls, or any other surface that requires to be made waterproof at a small cost, and is ready for use, in casks of 2 to 20 gallons.

Brilliant black, 2s. per gallon—Rich brown, 2s. 9s. per gallon.

EMERSON'S PATENT LIQUID CEMENT.—This valuable and economic PAINT is so adhesive, that it will cling to any surface—brick, Roman cement, and all other plastered work; and, being a rich cream colour, is more pleasing and natural in appearance than oil, and at an *eighth* of the *cost*. It is ready for use, will dry in a few hours, and possesses the property of protecting the walls as well as Roman cement. Sold in casks of 1 cwt. 2 cwts., and 3 cwts., at 8s., 15s., and 21s. per cask. GEO. LEAR & CO., Sole Agents, 16, Basing-lane, Cheapside.

KEATING'S COUGH LOZENGES—Under PATRONAGE OF ROYALTY AND THE AUTHORITY OF THE FACULTY.

COUGHS, ASTHMATIC AND CONSUMPTIVE COMPLAINTS, SHORTNESS OF BREATH, HOARSENESS, &c., EFFECTUALLY and SPEEDILY CURED by their use.

They have deservedly obtained the high patronage of their Majesties the King of Prussia and the King of Hanover—very many also of the Nobility and Clergy, and of the public generally, use them, under the recommendation of some of the most eminent of the faculty. Such medical testimony must be convincing of their efficacy.

Being made from the prescription of an eminent physician, they are confidently recommended to persons subject to the above complaints.

Allow the Lozenges to dissolve in the mouth gradually.

Prepared and sold, in boxes, 1s. 1½d., and tins, 2s. 9d., 4s. 6d., and 10s. 6d. each, by THOMAS KEATING, Chemist, &c., No. 79, ST. PAUL'S CHURCHYARD, LONDON.

COUGH CURED AFTER AN ATTACK OF INFLUENZA.

St. Ives, Hants, January 13, 1848.

Sir,—Having been attacked by the influenza, a short time ago, it left me with a very troublesome cough—was recommended to try your Lozenges, which, I am happy to say, completely cured me, after only taking half a box of them. I shall always feel the greatest pleasure and confidence in recommending your Lozenges to my friends.

I am, Sir, your most obedient servant,

Thomas Keating, Esq. Thos. E. Davis.

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,
23, HAWLEY-ROAD, KENTISH TOWN, LONDON,
to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual.

BY ROYAL LETTERS PATENT.

THE DIATONIC FLUTE is quite NEW in its CONSTRUCTION, and retains the old system of fingering.
Amateurs in the provinces have the opportunity of hearing this instrument played by Mr. Richardson, at Jullien's Concerts.—Description forwarded free, on application to the patentee. *MANUFACTORY, 135, FLEET-STREET.*
Published price 5s., "Theory of the Diatonic Flute," by A. Siccama, B.A., patentee.

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each.
DENT'S PATENT DIPLIEDOSCOPE,
or Meridian Instrument, is now ready for delivery.—Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning Eleven o'clock.

Bank Stock, 7 per Cent., 194
3 per Cent. Reduced Ann., 93½ 3 ½
3 per Cent. Consols Ann., 92¾ 3½
3½ per Cent. Ann., 93½ 4 ½
Long Annuities, 9
India Stock, 10½ per Cent., 245 ½
3 per Cent. Consols for Acc. 93½ ½
Exchequer Bills, 1000*l.* 2d. 42 5 pm.

Belgian, 4½ per Cent., 83
Dutch, 2½ per Cent., 50 ½
Brazilian, 5 per Cent., 82½ 4
Chilian, 6 per Cent., 97
Mexican 5 per Cent., 26½ ¾
Russian, 5 per Cent., 109½
Spanish, 5 per Cent, 17⅞
Ditto 3 per Cent., 29½

MINES.—The advance in the price of copper in the metal market, the prospect of increased demand, and the consequent expected improvement in the price of copper ore, with the rapid rise in the price of tin, and the firmness in the lead market, have had a great tendency to improve the mining share market; considerable business during the week has been effected in all kinds of mining shares, and more especially in the dividend-paying and leading mines.

Inquiries are being made for Devon Great Consols, but at rather lower prices than our present quotation. We learn that an improvement has taken place in Wheal Maria; in the 28 fm. level, west of Pryor's cross-cut, a branch has been discovered. and proved productive, the present end being worth 40*l.* per fm. At Wheal Fanny, the winze below the 35 fm. level, west of the western shaft, is turning out full 50 *tons to the fathom.*

South Wheal Bassett, Condurrow, and West Caradon are still in request at buyers' prices.

In Tincroft there has been considerable business done, and the mine is represented to be looking splendid, especially in the 90 fm. level, where they have a fine course of tin.

South Tamar, Lewis, Heignston Downs, and East Tamar have been in request, and several transactions effected.

Treviskey and Barrier shares have been sought for, but sellers are scarce at present prices.

At Wheal Seton meeting, a dividend of 6*l.* per share was declared. By the report, we find a considerable falling off in the returns, which will account for the several shares sold lately, coming on the market.

Shares in the following mines have changed hands during the week, viz:—Treviskey and Barrier, South Wheal Bassett, Tincroft, Tamar, Lewis, Callington, Wheal Trehane, West Wheal Jewel, East Tamar, South Tamar, Trelawny, Drake Walls, Mendip Hills, &c., &c.

At the Stray Park, Camborne Vean, and Wheal Francis meeting, a balance of 621*l.* 13s. 6d. was carried to the credit of the company. The profit on the two months (November and December) workings amounted to 312*l.* 4s. 11d., and the agents report is highly satisfactory. The purser's statement of accounts is in the usual tabular form, which must prove gratifying to the distant shareholders, as it conveys all the information necessary to create satisfaction.

At the East Pool meeting, the statement of accounts showed a profit of 9*l.* 17s. for December and January; a balance of 135*l.* 4s. against the company is carried to the next account.

In noticing Herodsfoot meeting, in last week's Journal, we stated the balance of 577*l.* 12s. 8d. to be in *favour* of the company instead of *against* the mine. And represented Wheal Sophia meeting making a call of 5*l.* instead of 5s. These errors were discovered too late for correction at the time.

In foreign mines there has been considerable business doing; the chief transactions have been in St. John del Rey, Copiapo, Barossa Range, and Australian.

By the last India Mail, we learn that the price of metal has advanced in the Bombay and China markets, and that a very slight stock remains on hand. Up to the date of advices, the Calcutta market had not much improved.

HULL, THURSDAY.—The share market is not quite so brisk, but there is no disposition to press sales of stock; railway debentures to pay a good rate of interest are scarce in the market, and some of the companies are turning away loans offered on very moderate terms; this looks well, and as the year advances, and traffic improves, we look for higher prices, unless political matters again operate prejudicially.

RAILWAY TRAFFIC RETURNS.

Name of Railway.	Lgth. Rway.	Present actual cost.	Price per share	Div. 1848	Traffic 1849	Returns. 1848
Belfast and Ballymena	37¾	—	20½	5 p.c.	£408	—
Birkenhead, Lancashire, & Chesh.	19	997,284	37	5 p.c.*	583	569
Bolton, Blackburn, & West Yorksh.	14	—	5⅝	—	357	—
Caledonian	141	3,993,732	23½-¾	—	4227	[illegible]
Chester and Holyhead	84	3,014,602	21½	4	1100	—
Dublin and Drogheda	35½	774,875	33½	—	679	669
Dublin and Kingstown	7½	395,915	—	—	612	632
Dundee, Perth, & Aberdeen Junc.	47½	544,554	25	8	945	684
East Anglian (Lynn to Ely)	67½	1,167,104	3½	—	698	426
East Lancashire	44	1,733,915	19½	5	1949	918
Eastern Counties and Norfolk	307	10,364,505	10¾	4	13362	12701
Eastern Union	51½	1,522,232	12¾	—	1201	1052
Edinburgh and Glasgow	57½	2,556,889	42	6	3133	2727
Edinburgh and Northern	78	1,722,213	12½	4*	1605	694
Glasgow, Paisley, and Ayr	102½	2,286,353	55	4	2355	1773
Glasgow, Paisley, & Greenock	23	848,328	14½	4	899	836
Gt. Northern & East Lincolnshire	110	—	10½	5*	1663	—
Gt. Southern & Western, Ireland	131	2,844,897	33½	4*	3305	1614
Great Western	305¼	11,608,815	101	7	17670	16295
Kendal and Windermere	10½	174,600	25½	—	105	91
Lancaster and Carlisle	70	1,476,102	56	4	2000	1252
Lancashire and Yorkshire	172½	8,242,628	72	6	11072	8031
London and North Western	435	25,077,942	140	7	36712	34183
London and Blackwall	4	1,299,675	5⅝	1-12	619	712
London, Brighton, & South Coast	162½	6,284,812	35½	2½	6756	5726
London and South-Western	215	7,490,688	40½	6	7472	6296
Londonderry and Enniskillen	14½	154,643	16	—	—	121
Manchester, Sheffield, & Lincolnsh.	91½	4,651,093	40⅝	5	3112	2062
Midland Company	471	14,042,340	88½	6	19319	17884
Midland Great Western (Irish)	50	725,332	18½	4*	1065	893
North British	99	3,163,450	16	5	2812	1725
Scottish Central	45½	1,245,496	25	—	879	—
Shrewsbury and Chester	47	780,272	18	5	1374	473
South Devon	55½	1,789,351	18	—	1430	680
South-Eastern	165½	7,389,322	25½	6⅞	6506	6369
Taff Vale	38	820,056	—	6½	1756	1894
Ulster	36	684,684	45⅞	—	688	582
Whitehaven Junction	12	150,879	109	3	—	158
York, Newcastle, & Berwick	269	5,038,255	27½	8	10985	9720
York and North Midland	255½	4,179,309	55	8	6307	5690
FOREIGN RAILWAYS.						
Amiens and Boulogne	76½	573,338	9¾-10	4	1534	—
Dieppe	26	—	—	—	445	—
Dutch Rhenish	57½	—	1½	—	940	866
Montereau and Troyes	71½	—	—	—	622	—
Northern of France	211	2,000,000	10½	—	12678	12633
Orleans to Bourges (Central)	107½	—	—	—	2081	2264
Orleans to Tours	72	600,000	32½	6	2802	2887
Paris and Orleans	82	2,011,720	31	12½	7114	7126
Paris and Rouen	85	2,082,916	20½	—	5755	7208
Rouen and Havre	59½	—	14	—	2551	2789
Strasburgh and Basle (monthly)	88	—	6	—	5497	5342
West Flanders (ditto)	—	—	1¾	—	828	1047

Interest.—Total for last week, £177,148, being an increase of £30,995 over last year.

JOINT-STOCK BANKS.

Shares.	Companies.	Paid.	Div. p. cent.	Price.
22,500	Australasia	£40	£3	£24 25½
20,000	British North American	50	6	41
20,000	Colonial	25	5	9½
—	Commercial of London	20	6	19
4,000	Ionian State	25	6	24½ 25
40,000	London Joint-Stock	10	6	14½
20,000	London and Westminster	20	6	23¾ ½ 4
10,000	National Provincial of England	35	5	33½
20,000	National of Ireland	22½	5	17½
20,000	Provincial of Ireland	25	8	40½ 40½
4,000	Ditto New	10	8	15
—	South Australia	22½	—	23⅝
20,000	Union of Australia	25	6	25
10,000	Ditto New	2½	6	2½ 2½
60,000	Union of London	10	6	10½

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwessin	8	8
1024	Alfred Consols	8⅝	5
1000	Antimony&Silver-Lead	5	5½
1024	AshburtonUnited Mines	8½	10
1624	Balleswidden	9	18
128	Balnoon Consols	25	25
10000	Banwen Iron Co.	6	6½
1000	Barristown	5½	1½
4000	Bedford	2	2¾
1244	Birch Tor Tin Mine	9	3
8000	Blaenavon	50	17½
100	Botallack	182	40
120	Brewer	5	7
10000	British Iron, New, regis.	12	7
—	Ditto ditto, scrip	10	10
128	Budnick Consols	52½	35
1000	Callington	20	12
1000	Camborne Consols	5	3½
20000	Cameron's Steam Coal	6	1
256	Caradon Copper Mine	9½	2½
256	Caradon Mines	22½	10
256	Caradon United	24	5
256	Caradon Wh. Hooper	21	8
1000	Carn Brea	15	100
3000	Carthew Consols	1½	5
112	Charlestown	220	60
512	Coatlithe Hill	¼	1
500	Comblawn	5½	3
128	Comfort	45	35
256	Condurrow	20	40
2560	Cook's Kitchen	14	2
1000	Coombe Valley Quarry	3½	4½
6500	Cornish Mining Co.	2	2¾-½
20000	Cornwall New Mining	1	1
1000	Copper Bottom	1½	6½
1024	Cosheen	4½	—
212	Craddock Moor	23½	5
128	Creeg Braws	120	60
500	Cubert Mine	12½	—
1000	Cwm Erfin	3	4
300	D.Prior & Buckfastleigh	—	—
7100	Derwent	8½	5
845	Devon&CourtenayCon.	7¾	¾
1024	Devon Great Consols	1	230
1000	Dhurode	2	5
186	Dolcoath	30	15
2560	Drake Walls	5½	4-4½
10000	Durham County Coal	45	9
3000	Dyfngwm	10	12½
512	East Alvenney	5½	5½
2500	East Birch Tor	3	3½
112	East Caradon	47	47
2048	East Crowndale	6⅞	4
512	East Combe Silver-Lead	6½	6½
128	East Pool	15	30
9000	East Tamar Consols	¾	¾
94	East Wheal Crofty	125	250
1024	East Wheal Fortune	2	3
128	East Wheal Rose	50	600
—	East of Scotland Iron Co.	5	1½
123	East Wheal Seton	14	10
1280	Esgair Lli	1½	5
256	Exmoor Wh. Eliza	6	6
512	Fowey Consols	40	45
1024	Freidd Llwydd Mines	1½	3½
6400	Gadair	2	2
4000	Gen. Mining Co. for Irel.	1½	1½
256	Gonamena	44½	16
128	Goonvrea	4	2
100	Great Consols	1000	175
256	Great Resugga Moor	11	6
512	Gt. Wh. Rough Tor Con.	18½	11
1200	Growa Slate Company	5	5
256	Gwinear Consols	7	1
6000	Heigaston Down Con.	1½	1¾-2
256	Herodsfoot	27	24
10000	Hibernian	12½	1⅝
239	Hobb's Hill	6	1½
1000	Holmbush	22	2
1024	Kingsett and Bedford	½	7½
827	Kirkcudbrightshire	8½	2
2048	Lamherooe Wh. Maria	13	2
252	Lanarth Consols	—	10
128	Lelant Consols	90	60
160	Levant	—	135
1000	Lewis	16	10½
1000	Llwyn Malees	7½	7
3600	Llynvi Iron	50	50
256	Lostwithiel Consols	19	14
6000	Marke Valley	10	1½
5000	Mendip Hills	3	1½
5000	Merionethshire SlateCo.	1½	2
128	Metha	34	140
20000	Mining Co. of Ireland	7	4
256	New East Crowndale	3½	2½
100	North Pool	45	535
140	North Roskear	5½	165
262	North Wh. Leisure	1½	2
15000	Northern Coal Co.	23	2
128	Par Consols	55⅝	1000
8000	Pennant & Craigwen	2	2
1024	Penzance Consols	16s 3d.	2
512	Plymouth Wh. Yeoland	6½	10
200	Polsaith Consols	5½	4½
2500	Rhoswiddol&Bacheidon	10	10
10000	Rhymney Iron	50	13
10000	Ditto New	7	6½
1000	Rosewall Hill	1	5
256	Rosewarva Mines	—	12
2048	Runnaford Coombe Tin	¾	2
9000	South Tamar	¾	¾
128	South Caradon	5	400

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price.
1100	South Dolcoath	4	5
256	Sth. Friendsh. Wh. Ann	20	4
256	South Molton	5	12½
256	South Tolgus	10	50
256	South Trelawny	28½	3
2000	South Wales Mining Co.	¾	1-1½
128	South Wheal Basset	110	205
124	South Wh. Frances	160	220
256	South Wh. Josiah	—	3
1000	South Wh. Maria	2¾	1½
10000	Southern&Western, Irish	2	4
280	Spearne Moor	30	40
256	St. Austell Consols	9	—
94	St. Ives Consols	—	320
128	St. Michael Penkivel	5	10½
999	St. Minver Consols	1	6
1000	Stray Park	43	18½
9600	Tamar Consols	3	6
1024	Tavy Consols	6	1
6000	Tincroft	7	8½
1000	Tin Vale	2½	2½
58	Tokenbury	170	10
256	Tregordan	2	8
256	Trehane	1½	28
5000	Treleigh Consols	6	1½
2000	Trenance	3	—
96	Tresavean	10	150
120	Trethellan	5	17
120	Treviskey and Barrier	130	95
288	Trevean	1½	5
100	United Mines	300	350
256	Wellington Mines	25	25-35
128	West Buller	10	150
256	West Caradon	20	125
512	West Fowey Consols	40	12
256	West Providence	9	15
200	West Seton	40	210
—	West of Scotland Iron Co.	240	90
120	West Trethellan	5	25
256	West United Hills	—	4½
512	West Wheal Frances	1½	2
256	West Wh. Friendship	9	8
3725	West Wheal Jewel	11	¼-⅜
256	West Wheal Tolgus	21½	8
256	West Wheal Treasury	19	5
1024	Whiddon Mines	4½	2
5200	Wicklow Copper	5	7¾
107	Wheal Adams	79	30
1000	Wheal Agar	—	8
256	Wheal Albert	10	1
240	Wheal Anderton	23	15
128	Wheal Ann	—	50½
512	Wheal Anna Maria	6½	8
1024	Wheal Ash	4½	8
120	Wheal Bal	5½	20
256	Wheal Benny	14½	2
256	Wheal Blencowe	21	5
256	Wheal Bucketts	20	5
256	Wheal Calstock	5	12
1024	Wheal Coad	1	4
268	Wheal Courtenay	12½	15
256	Wheal Fortescue	6½	—
288	Wheal Franco	27	18
128	Wheal Harriet	45	—
100	Wheal Henry	—	24
1024	Wheal Lawrence	3	3
112	Wheal Margaret	79	200
512	Wheal Mary Ann	5	12½
208	Wheal Mary Consols	60½	8
—	Wheal Penhale	—	12
210	Wheal Prospect	4	7
120	Wheal Reeth	41	150
128	Wheal Rose	60	3
99	Wheal Seton	214	550
180	Wheal Sisters	35½	5
494	Wheal Sophia	4½	5
128	Wheal Spearne	10	75
128	Wheal St. Ann	30	35
550	Wheal Trescoll	6	6½
260	Wheal Trelawny	7½	65-70
256	Wh. Tremaine (St. Ervan)	9½	2½
1024	Wheal Tremayne	9½	3
92	Wheal Tryphena	140	265
1000	Wheal Vincent	2	7
256	Wheal Vlow (Perranz.)	¾	¾
184	Wheal Vyvyan	—	60
250	Wheal Williams	28½	8
1024	William & Mary Worth	2	2½

FOREIGN MINES.

Shares.	Company.	Paid.	Price.
5000	Alten Mining Company	14½	1½
15000	Asturian Mining Co.	15	3½-½
20000	Australian	3	5½-¾
10000	Anglo-Mexican Co.	100	¼
12374	Ditto Subscription	25	1½
6000	Barossa Range	1⅝	2
3000	Bolanos	150	2½
2000	Ditto Scrip	15	2½
10000	Brazilian Imperial	23	6-5½
12000	Cobre Copper Co.	40	18½
10000	Copiapo Mining Co.	14	3½
10000	General Mining Ass'n.	20	10
—	Guadalcanal	4½	10-11
5000	Kinzigthal Mining Ass.	2	3
20051	Mexican Company	59	—
2000	Mexican & South Amer.	8	⅜
5000	National Brazilian	30	3½
104000	N. Brit. Australasian	1	½
7000	Royal Santiago	10	5½
11000	St. John del Rey	15	11½
43174	United Mexican ... Av.	28½	2½-¾

**** *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

LATEST CURRENT PRICES OF METALS.

LONDON, FEBRUARY 23, 1849.

	per ton.
ENGLISH IRON. *a*	
Bar, bolt, & square, London	£7 0 0
Nail rods	7 10 0
Hoops	9 0 0
Sheets (singles)	10 0 0
Bars, at Cardiff & Newport	6 0 0
Refined metal Wales	4—4 5
Anthracite	4—4 5
Pig, No. 1, Wales, cold-blast	4 0 0
Do. do. hot-blast	3 15 0
Do., No. 1, Clyde ... *net cash*	2—2 15
Stirling's Patent Toughened Pigs in Glasgow	3 3-3 6
Stirling's Patent Toughened Pigs in Wales	4 10-4 15
Staffordshire bars, at the works	7 10 0
Pigs, in Staffordshire	3 5-4
Rails	6 0 0
Chairs	4 5 0
FOREIGN IRON. *b*	
Swedish	13 10 0
CCND	17 0 0
PSI	—
Gourieff	—
Archangel	12 10-13
FOREIGN STEEL. *c*	
Swedish keg	13 10-14
Ditto faggot	15 10 0
ENGLISH COPPER. *d*	
Sheets, sheathing, & bolts, *p. lb.*	0 0 9½
Tough cake ... *per ton*	84 0 0
Tile	83 0 0
Old copper *e* ... *per lb.*	0 0 7½

FOREIGN COPPER. *f*	
South American, in bond	£73-75
ENGLISH LEAD. *g*	
Pig ... *per ton*	£16 0 0
Sheet	16 15 0
Red lead	17 10 0
White ditto	22 0 0
Patent shot	19 15 0
FOREIGN LEAD. *h*	
Spanish, in bond	15 10 0
American ditto	—
ENGLISH TIN. *i*	
Block ... *per cwt.*	4 12 0
Bar	4 13 0
FOREIGN TIN *k*	
Banca, in bond	4 17 0
Straits	4 15 0
Peruvian (6 mo. 2½ p. ct. dis.)	—
TIN-PLATES. *l*	
IC Coke ... *per box*	1 9 0
IC Charcoal	1 13 0
IX ditto	1 19 0
SPELTER. *m*	
Plates, warehoused, ... *per ton*	15 0-15 5
Ditto, to arrive	—
ZINC. *n*	
English sheet ... *per ton*	20 0 0
QUICKSILVER, *o* ... *per lb.*	0 3 5

Terms.—*a*, 6 months, or 2½ per cent. dis.; *b*, ditto; *c*, ditto; *d*, 6 months, or 3 per ct. dis; *e*, 6 months, or 2½ per cent. dis.; *f*, ditto; *g*, ditto; *h*, ditto; *i*, ditto; *k*, net cash. *l*, 6 months, or 3 p. ct. dis.; *m*, net cash; *n*, 3 months, or 1½ p. c. dis.; *o*, ditto, 1½ dis.

REMARKS.—We have again to notice a further improvement in the iron market, and a good business has been done at the advance of last week. Makers are exceedingly firm, and decline to sell bars in Wales below our quotation. Staffordshire ironmasters have advanced their price 26s. per ton, and being full of orders are not anxious to increase their engagements. The Scotch pig-iron market is steady, but firm, and higher rates are freely paid for brands most in request in America—namely: Gartsherrie, Summerlee, and Glengarnock, We quote the price of No. 1 Gartsherrie, 57s. to 57s. 6d.; and for No. 1 Summerlee and Glengarnock, 55s. 6d. to 56s.; ordinary brands, mixed Nos., 53s. 6d. cash, free-on-board at Glasgow.

BIRMINGHAM, FRIDAY.—The iron trade is remarkably brisk, orders being more than usually abundant. So decided a start has the market taken, that on Monday last the principal houses in South Staffordshire issued circulars announcing an advance of 1*l.* per ton.

GLASGOW, FEB. 20.—Yesterday and to-day our market for pig-iron was depressed, owing to holders realising; and sales were made at 51s., 52s., and 51s. 6d. per ton cash, for mixed Nos. and all No. 1. The news by the steamer from the United States being considered favourable as regards iron, the market closed a shade firmer, and sellers demanded 52s. cash for mixed Nos.——21st.—Our market for pig-iron to-day was not so excited, purchases were more easily made, even of American brands; the accounts of pig-iron from the United States are not so very favourable as was anticipated, higher rates are looked for by next mail; 52s. to 54s., according to brand, is the price of mixed Nos. to-day.——22d.—The market was pretty much the same as yesterday, but rather higher prices were demanded; 53s. to 55s. for good brands is the price of mixed Nos. to-day, and a few sales have been made of Gartsherry No. 1 at 57s.—immediate cash payment.

INDIAN METAL MARKET.

BOMBAY, JAN. 17.—COPPER: Stocks of all kinds are very light, and some further improvement has taken place in the value of sheathing and braziers.—IRON: A sale of Swedish bar, to arrive, has had effect at 70 rs. per candy. British bar has also improved somewhat further. In the list of sales is a parcel of iron, the produce of this country, which has been disposed of at 36 rs. per candy. Nail-rod, both square and round, has advanced in price. Sheet-iron continues in good demand. Hoop-iron is steady.—LEAD is in good inquiry at advanced prices.—TIN PLATES are scarce, and wanted.—STEEL, in tubs, has improved in price.—SPELTER is dull, and has a downward tendency.

CALCUTTA, JAN. 8.—COPPER: We have no improvement to notice in prices, but a fair extent of business has been done.—IRON: In consequence of smallness of stocks and moderate imports, holders have been able to realise at full rates.—SPELTER: A moderate business has been done under this head, and prices have remained steady during the whole month.—STEEL: The operations of the month in this article have been confined to the following:—145 tubs Swedish, at Co. rs. 6-5 to 6-7 per fy. mds.; 100 boxes, at Co. rs. 6-4 6 per fy. md.—LEAD: The market remains dull and inactive.—TIN PLATES: We have to report the sale of 75 boxes, at Co. rs. 17-6; and 40 boxes. at Co. rs. 18-2 to 19 per box.—QUICKSILVER: 25 boxes have been placed at Co. rs. 4-10-6 per fy. seer.; 526 mds. of brass have been sold at Co. rs. 18 to 20-4-6 per fy. md., and 2500 mds. Brass pice, at Co. rs. 17-8 to 17-12 per fy. md. Iron kentlage, 200 tons, at 8 per cwt.

IMPORTANT INVENTION FOR STOPPING STEAM-ENGINES.—A Bradford correspondent says,—"On Wednesday last, through the kindness of Messrs. Smith and Booth, manufacturers, Southgate, we had an opportunity of witnessing on their premises the working of a simple piece of machinery, by means of which a steam-engine of 30-horse power was stopped almost instantaneously. We were taken to one end of a spinning-room when the machinery of the whole mill was in full operation, with the steam-engine at full speed, when a valve was opened which admitted the atmospheric air, which instantly choked the condenser of the engine, shut off the throttle and water valves, and opened the blow valves. The instant this was done the fly-wheel only made one revolution and a quarter. In the ordinary manner of stopping the engine, the fly-wheel makes five revolutions before it can be brought to a stand. So complete is this simple piece of mechanism, that, although the whole machinery throughout the mill is stopped so suddenly, not a single thread is broken, but all remains ready for resuming work when the engine is again set in motion. This piece of machinery, which we may term a safety-valve, may be placed in any room of the mill, or on any part of the premises, or even off the premises; and, by the means of pipes, it can be made to have the same effect as if within a yard of the engine itself—so that, if an accident happens, such as an overlooker, or other person, being caught with one of the mill straps, and drawn up to go round the shaft, by using this mode of stopping the engine, before he could by any possibility come in contact with the shaft, the whole machinery would be brought to a standstill, and his life saved. This wonderful and useful discovery is the invention of James Mills, of Horton, the engine-tenter at the mill in which it is now in operation, and reflects the highest credit on his ingenuity as a hard-working mechanic. A patent was sealed for it on Monday, the 12th inst., in the names of Mr. G. E. Donisthorpe and James Mills, Mr. Donisthorpe carrying the invention out more fully—viz.: to high-pressure engines, water-wheels, &c. The expense of fixing machinery in connection with the invention in manufactories will be about 10s. each horse-power.—*Times.*

LLYNVI IRON-WORKS.—It is rumoured that another furnace will soon be blown in at the Llynvi Iron-Works.

LEAD ORES

Ticketings at the King's Head Hotel, Holywell, February 22.

Mines.	Tons.	Amount.	Purchasers.
Pen-yr-henblas	50	£10 3 6	J. P. Eyton.
ditto	46	10 3 6	Newton and Parker.
Westminster	60	9 6 0	Newton, Keates, & Co.
Jamaica	60	9 17 6	Walker, Parker, & Co.
Belgrave	30	9 17 6	ditto
Deep Level	49	10 0 0	ditto
Catch	12	10 6 6	Newton, Keates, & Co.
Herward	4	10 15 6	ditto
ditto	5½	8 8 0	Walker, Parker, & Co.
Milwr	2	10 11 0	J. P. Eyton.
Douglas (Isle of Man)	75	10 10 0	Walker, Parker, & Co.
Machynlleth	54	10 9 6	Newton, Keates, & Co.
ditto	38	10 6 0	ditto
Barlead	2¼	105 15 0	ditto
Total tons		485¾.	
Sold at the Mine.			
East Wheal Rose	68	£11 15 6	Treffry and Sims.
ditto	58	12 10 6	Sims & Co.
ditto	41	11 11 6	ditto
Sold at Aberystwith.			
Goginan	33	£14 3 6	Newton and Somers.
ditto	32	14 7 6	Newton, Keates, & Co.
Frongoch	50	9 9 6	Somers.

BLACK TIN

Mine.	Tons.	Price.	Purchasers.
Drake Walls	6	55 7 6	J. H. Enthoven & Co.
ditto	7½	46 5 0	Daubuz.
ditto	4½	33 5 0	Calenick Smelting Co.
ditto	2	41 15 0	ditto
Polberrou	24½	50 10 0	Daubuz and Enthoven.
ditto	3½	46 17 6	Williams and Co.
ditto	1½	45 0 0	ditto
West Wheal Jewel	5	51 12 6	ditto
ditto	7½	51 15 0	Calenick Smelting Co.
ditto	3½	51 10 0	ditto
ditto	1½	47 15 0	Bissoe Company.

COPPER ORES.

Sampled Feb. 7, and Sold at Andrew's Hotel, Redruth, Feb. 22, 1849.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Devon Gt. Cons. } Wh. Josiah }	110	£6 10 6	West Caradon	38	£14 6 0
ditto	96	7 10 0	Fowey Consols	98	5 13 0
ditto	88	6 2 0	ditto	85	7 6 6
ditto	80	6 15 6	ditto	77	7 13 0
ditto	77	5 5 0	Wh. Friendship	109	8 7 0
ditto	37	5 1 0	ditto	100	8 3 0
Wh. Fanny	98	4 19 6	ditto	33	4 11 6
ditto	96	4 6 6	Marke Valley	68	2 13 0
ditto	95	4 6 6	ditto	64	2 17 0
ditto	93	4 14 0	ditto	18	2 9 6
ditto	91	4 12 6	Bedford United	116	5 14 0
ditto	90	4 10 0	West Wh. Jewel	39	2 18 6
ditto	76	4 11 0	ditto	27	3 19 6
ditto	63	4 12 6	Wh. Mary Consols.	57	6 0 6
ditto	39	4 6 6	Wh. Pink	55	4 17 6
Wh. Maria	71	4 17 0	Holmbush	50	5 6 6
ditto	47	10 13 0	Treleigh Consols	50	10 19 0
ditto	38	1 18 6	Wh. Bucketts	24	4 5 0
Wh. Anna Maria	79	6 5 0	ditto	22	3 0 6
ditto	62	6 16 6	South Wh. Fortune	20	4 1 6
West Caradon	91	7 2 0	ditto	11	8 5 6
ditto	79	7 11 0	Phœnix Mines	22	10 15 0
ditto	42	3 17 6	Tamar Slag	21	6 7 6
ditto	39	7 8 0	Polgooth	9	10 6 0

TOTAL PRODUCE.

Devon Gt. Cons., Wh. Josiah, Wh. Maria, Wh. Fanny, Wh. Anna Maria	1526	£8325 1 0	West Wh. Jewel	66	£221 8 0
West Caradon	289	2237 6 0	Wh. Mary Consols.	57	343 8 6
Fowey Consols	260	1765 7 6	Wh. Pink	55	268 2 6
Wh. Friendship	242	1876 2 6	Holmbush	50	266 5 0
Marke Valley	150	407 3 0	Treleigh Consols	50	547 10 0
Bedford United	116	661 4 0	Wh. Bucketts	46	168 11 0
			South Wh. Fortune	31	172 10 6
			Phœnix Mines	22	236 10 0
			Tamar Slag	21	133 17 6
			Polgooth	9	92 14 0

Average Standard ... £90 8 0 | Average Produce ... 9½
Average Price per ton ... £5 18 6
Quantity of Ore ... 2990 tons. | Quantity of Fine Copper, 287 tons 0 cwt.
Amount of Money ... £17,723 1 0
LAST SALE.—Average Standard ... £91 16 0.—Average Produce ... 9
Standard of corresponding sale last month, 84*l.* 12s.—Produce, 9½.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	363	£2112 15 9
Vivian and Sons	345	2502 0 6
Freeman and Co.	830	4410 19 6
P. Grenfell and Sons	525	3090 19 6
Sims, Willyams, and Co.	375	2207 3 0
Williams, Foster, and Co	474	2717 11 6
Schneider and Co.	78	681 11 3
Total tons	2990	£17,723 1 9

Copper ores for sale on Thursday next, at Farquharson's Hotel, Truro.—Mines and Parcels.—United Mines 1427—Par Consols 296—South Caradon 263—Wheal Comfort 211—Tresavean 198—Creegbraws 135—West Trethellan 34.—Total 2564 tons.

Copper ores for sale on Thursday week, at White's Hotel, Pool.—Mines and Parcels.—North Roskear 890—North Pool 560—Consolidated Mines 575—Tincroft 340—Wheal Seton 291—Fowey Consols 238—South Roskear 194—Wheal Henry 179—South Wheal Frances 173—South Wheal Basset 148—Wheal Busy 39—Cullom's ore 17.—Total quantity of ore to be sold, 3684 tons.

COPPER ORES

Copper ores for sale March 1.—Cobro 115, ditto 112, ditto 58, ditto 60, ditto 58, ditto 45, ditto 39, ditto 12, ditto 83, ditto 72, ditto 67, ditto 65, ditto 64, ditto 63, ditto 61, ditto 52.—Copiapo 82, ditto 80, ditto 78, ditto 38—Knockmahon 118, ditto 110, ditto 28—Burra Burra 70, ditto 53, ditto 51, ditto 30—Berehaven 100, ditto 98—Forest Slag 64.—Total quantity of ore to be sold, 2086 tons.

NOTICES TO CORRESPONDENTS.

We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses—not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

"T. H." (Clapham).—We perfectly agree with our correspondent, as to the mystification adopted in the quotations of mining shares; and that the system of the brokers generally is to report business done, or otherwise, and prices obtained, just as it suits their own interest, as being buyers or sellers. The proposal for a Mine Share Exchange has been long, and repeatedly before the public, and in every case has failed, nor have we much hope of better success should another scheme be started on the present occasion. If, however, our correspondent, or any other party interested in the subject, will send us a draft of a well arranged and practicable plan, we will support it by giving it publicity in our columns.

Ventilation of Coal Mines.—In our description of Mr. Rogers's plan of ventilation by elm trunks, zinc pipes, and a fan, in the *Mining Journal* of the 3d inst., it would appear as if two furnaces were required. The fact is Mr. Rogers's plan dispenses with a furnace altogether, and appears simple and practicable. We have been favoured with a well executed diagram descriptive of the system, which we shall be happy to show to any parties interested who may call at our office.

Mr. David Mushet's communication shall appear in our next Journal.

"A Young Meteorologist."—The changes of the moon have no connection with the weather. They happen 52 times in the year, and the weather changes about 40 times; hence the changes often happen together, and have given rise to the commonly received idea.

"An Old Lynx-eyed Miner," should have sent us his name, in confidence. We do not object to anonymous signatures in the Journal, aware that in many cases it can hardly be expected for communicants to publish their real names, but in every case we must know who our correspondents are. In the present case, however, it is of little moment, as the communication is wholly inadmissable, it being a tirade of personalities and evident pique against the mining interests of a certain district. The language we should guess to be that of a disappointed man, envious at the success of others.

"A New Subscriber" is referred to the paper on the Smelting of Copper Ores, by Mr. A. Merry, at Birmingham, in the Journal of the 4th November last.

"A Subscriber" writes—"It is said to have been discovered, in South Australia, that the efficacy of Napier's process of smelting ores is not produced by the action of electricity. If so: *query*, as to the validity of the patent, on the ground of misdescription in the specification?"

We have not yet been able to obtain a copy of the communication of Dr. Percy, on the Extraction of Silver by the Wet Way, to the British Association. As soon as we can, we shall insert it in our columns. The other matters shall meet early attention.

"G. B." (Bolton) enquires from what mines is the African gold produced? We do not know from what deposit the gold dust exported from the coast of Guinea is derived; our opinion is that it has never been discovered; as it has been for several centuries an article of trade, its existence would have been known to the natives; they are sufficiently civilised, were such the case, to be able to mine in a rough manner, and doubtless would, instead of seeking it in the ravines and beds of rivers, have repaired to the original source. None of the travellers who have been in Africa mention the existence of any gold mines.

"An Adventurer" (Greenwich).—Grey copper ore cannot be smelted with advantage alone: it runs down too quickly, and rarely produces a clean slag. The best flux is stubborn ores, containing iron pyrites.

"F. M." (Lincoln).—The Royal North of Spain Railway was one of those projected in 1845. It has been long since defunct, and, in all probability, will never again be resuscitated. A line has been surveyed from Mieres to Aviles, by Mr. Manby, and this, no doubt, in more favourable times, will be rendered available by some of the mining companies in the Asturias.

T. Raikes (Hull).—The Tunfield Moor coal is generally considered the best adapted for making coke.

"A Mechanic" (Coventry).—We would advise you to write to the secretary of the Society of Arts, who would, no doubt, give advice for your guidance.

"Z. A." (Winborne).—The saving effected by using gas in preference to other light, has been calculated according to the following ratio:—One-third as cheap as tallow; one-fourth as sperm oil and composition candles; one-tenth as wax candles; and one-half as common oil. The matter is more especially referred to in another column.

F. Russel (Canterbury).—The word "Stannary," is derived from the Latin *stannum* (tin). The production of tin in the county of Cornwall is of very ancient date. It is supposed the Phœnicians traded to Britain for this metal. The south-western portions of the island were known to the Greeks. Their appellation was the *Cassiterides*. It cannot be said with certainty whether this applied to Cornwall or the Scilly Islands.

"J. M." (Gwennap).—The first discovery of minerals in Australia was in the year 1844.

"Copper" (Becralston).—If you will refer to the back numbers of our Journal for the months of September and October, under the head of "Copper Sheathing," you will find all the information you require.

"An Engineer" (Newcastle-on-Tyne).—The engineers employed in Russia are mostly Americans. The Government works for the construction of steam-engines, &c., are under the management of natives of that country, and their staff and working men are all supplied from America. In Sweden, or Denmark, you might, probably, be able to meet with good employment; and it is not difficult in those two countries to obtain situations in the Government works. Should the Germans organise a fleet, there would be openings there for marine engineers.

"Californian" (Louth).—We should advise you to read the last accounts from California. As yet we have had nothing but the certainly questionable reports from the American press, and interested parties; therefore, we say, "wait a little longer," before you think of embarking your capital in a speculation which, at present, appears somewhat dubious. We hope to receive some authentic information, from a gentleman practically competent, and in whom we have the fullest confidence.

"Smelter" (Cardiff).—We do not think there is any probability of your obtaining a situation in any of the works you mention. Your best chance would be, to endeavour to procure some employment in one of the foreign companies.

"L. T." (Stroud).—Stourbridge bricks are generaly reckoned the best; but if you do not require a great heat, the common Newcastle bricks will serve your purpose.

"A Constant Reader" (Glasgow).—We regret that we are compelled to decline your communication. Had it been written in a more temperate and guarded stile, we should have inserted it. However ill-treated you may have been, the way to obtain redress is not by vituperation or defamatory language. If possible, endeavour to come to some terms with your antagonist, so as to avoid litigation. Remember the fable of the lawyer and the oyster.

J. Jones (Llanelly).—We shall be glad to receive a paper on the subject you propose; it shall receive our best consideration.

"S. G." (Shrewsbury).—The deepest copper mines in the world are those of Cornwall. none of those abroad are to be compared in depth with them, though some of the Saxon mines, in the Ersgeberge, are much larger in areal extent.

"Chemicus" (Liverpool).—There is a very good translation of Berzelius, on the blow-pipe, by Children; it has, however, been out of print some time, and is very difficult to be obtained. If you understand German, any foreign bookseller can obtain one in a few days from Hamburgh.

"L. Z." (Rochdale).—It is our intention shortly to publish some communications which we have received on the subject to which you allude—other and more important matter has hitherto been the sole cause of its exclusion.

"An Original Subscriber" (Guildford).—We are not in the habit of advising our readers to invest in any particular undertakings. In fact, our invariable rule has been to avoid any appearance of partiality; and we think, in this case, you must be labouring under a misapprehension. A short time since, a meeting of the company you refer to was held, when it appeared that, during the past year, it had suffered with the general depression of the times, and that trade in particular—no dividend was declared; the directors, however, anticipated an improvement, and hoped to be in a position shortly to declare one. From what we have heard, the meeting was considered satisfactory by those shareholders who were present.

"An Assayer" (Truro) shall receive the information he requires next week.

"An Intending Shareholder" should consult some respectable city broker, who will give the information, and advise as to the prospects of the undertaking.

*** It is particularly requested that all communications may be addressed—

To the Editor,
Mining Journal Office,
26, Fleet-street, London.

And Post-office orders made payable to Wm. Salmon Mansell, as acting for the proprietors.

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, FEBRUARY 24, 1849.

In some statistical remarks in the Mining Journal of the 10th inst., on the anthracite of Pennsylvania, the following observation occurred, "From this we may learn that anthracite coal, without fans, is comparatively useless on board steamers, and on railways it has proved a complete failure." In answer to this assertion, we have received a communication from Mr. John Player, jun., of Bryn Amman, in which he give us some information which leads us to doubt the correctness of the remark. He states, that in 1839 there was a small iron steam-boat built by Ditchburn, with engines and boilers by Penn, expressly for proving the applicability of anthracite coal, and for marine engines. This boat made a number of experimental trips, at which many eminent engineers were present, and who expressed themselves perfectly satisfied with the result. The boat ran for *two years* between Woolwich and Hungerford-market, *and used anthracite coal the whole time without a fan blower*; the speed was equal to the fastest iron boat of the same class then on the river (the *Bride*), and the economy of using that fuel, in preference to coke, was proved during that time to have been 30 per cent. From extracts and copies of letters from several parties in America, we find that anthracite is very generally used *without fans* on many railways in Pennsylvania with great economy, and also that eminent locomotive builders guarantee their engines to burn anthracite coal. One of the extracts, that from the letter of the engineer of the Beaver Meadow Railway, may interest some of our readers—"There are now (1839) in use on the Beaver Meadow and Hazeltown Railroad *seven* locomotive-engines, with horizontal boilers, in which anthracite coal is exclusiv ely used as a fuel after the first firing in the morning; and that we continue to use it when we can have wood for the cost of cutting, is sufficient evidence that we find it to our advantage." From this it appears that anthracite coal has been used with economy in locomotive and steamship boilers, and in this district, along 60 miles of the north crop of the basin, are numerous pumping, winding, and blast-engines using no other fuel. In the last Mining Journal the evaporative power of various coal is given from Mr. Joshua Richardson's paper, read last week at the Institution of Civil Engineers, as follows:—1 lb. of Welsh coal will evaporate 9 lbs. of water; 1 lb. Newcastle and Yorkshire, 7½ lbs.; 1 lb. Lancashire, 7 lbs.; 1 lb. Scotch, 6 lbs. We will therefore add that of anthracite, to show its intrinsic worth it is given in a paper read, in 1841, by Dr. Fife, "On the Evaporative Power of different kinds of Coal," before the Society of Arts for Scotland; he states that Dr. Schaphaeutel (of Munich) found that, by the combustion of 372·28 lbs. of anthracite, there were evaporated 3934·3 lbs. of water, under a pressure of 13·3 lbs. per inch, thus giving 10·56 for each pound actually consumed; but, making allowance for pressure, the quantity that would have been evaporated at 212 degrees would be 11·11 lbs. The analysis of the coal used was—Carbon, 92; volatile matter, 5·97; ash, 1·61. The perfect absence of smoke should recommend this fuel to more general use.

In our advertising columns will be found a notice from the authorities of the Duchy of Cornwall, intimating their intention to let the Tywarnhaile Mines, comprising United Hills and South Towan Mines, with Wheal Charles and Wheal Fancy, at moderate dues for 21 years. The stoppage of the United Hills Mines, about two years since, occasioned by the influx of the water of the South Towan Mine, will be in the recollection of most of our mining readers—a catastrophe which, at a moment when the adventurers were anxiously, and not without reasonable grounds, expecting some return for their long dormant capital, and notwithstanding the engines were worked at a forced rate of 12 strokes per minute, the driving the bottom levels was frequently interrupted, and the sinking the sump of the engine-shaft rendered impossible. The directors of the company would doubtless have attempted to make such additions and alterations in the machinery as would have overcome this difficulty; but, from its constitution as a scrip company, it was impracticable to obtain from the shareholders the additional capital required; while the extreme depression of the standard, combined with these circumstances, determined them on abandoning the mines. Not only were the prospects of the adventurers thus blighted, but this untoward accident threatened the entire of the St. Agnes mining district with poverty and destitution, as the population might be said at this period to be dependant on these mines for employment, the Great Polberrow Tin Mines being in the possession of the Vice-Warden's Court, all, except a few surface labourers, had been discharged from them, and of the other mines in the district few, if any, were working. To have offered the Tywarnhaile Mines to other tenants, while beset with difficulties of drainage, and inefficient machinery, during a period of such universal depression, would have been fruitless; and, accordingly, the council of H. R. H. the Prince of Wales determined to take the mines into their own hands, and to keep them in work until an improved state of the money market supervened, and an increase in the price of the copper ores took place, whereby the spirit of mining enterprise, might be restored, making in the meantime such additions to the engine power and machinery, and doing all such work as might bring them into a thoroughly good state of operation. The area over which these mines extend forms one of the largest setts in the county of Cornwall; there are four main or champion lodes—South Towan, Wheal Clarence, United Hills, and Wheal Charles, besides several smaller lodes and branches. The operations on the United Hills lode are very extensive, reaching east from the valley running down to Porth Towan more than ½ mile; the principal engine-shaft is now sinking below the 90 fm. level under the adit, which latter is 45 fms. deep. Good discoveries of ore have been made, since the mine has been in the hands of the Duchy, in the 40, 60, 70, and 80 fm. levels east, in the 80 fm. level west on the north lode, and in the 60 and 70 fm. levels west. South Towan has been drained to a depth equal to that of the deepest part of the United Hills, and all difficulty in keeping the latter mine drained is thus for the future obviated. There is in the mine a large extent of untried ground, lying parallel to the best parts of the United Hills, from which much may be expected. Wheal Charles is a promising mine, not more than 40 fms. deep, but producing considerable quantities of ore at that level. Wheal Sparrow, lying to the west of Wheal Charles, upon the same lode, is worked to the same depth, and some very productive ore ground has been met with in the 30 and 40 fm. levels. Among the improvements for the future working of these mines, the new dressing-floors, and the apparatus employed in grinding and washing the ores deserve notice, as effecting a great economy in those operations. While we apprehend it would be needless to dwell at length on the benefits conferred on the district by this spirited proceeding on the part of the Council of the Duchy, we draw attention to the fact, to show what happy results may emanate from judicious mining enterprise, even in cases which, at a casual glance, might appear hopeless. Here we have a case in which, from a large accumulation of water in an abandoned adjoining sett, the mine is drowned, the powerful machinery rendered useless, and the further working given up in despair by the adventurers, when the authorities, by a well-timed outlay in increasing the power of the machinery, clear the mine, deepen the drainage of its offending neighbour, so that such an accident cannot again occur, extend the workings, during which sufficient ore is raised nearly to cover costs, and place the property in a position to be advantageously taken up by a new body of proprietors with every prospect of profitable results. During all these proceedings, the population of the district have been enabled to obtain a livelihood for themselves and families; and, instead of a deserted village, abandoned mines, and general barrenness and destitution, the foundation is laid for future activity, continuous employment, with sufficient means for the miners, and a promise of return to the adventurers. The circumstances of this case hold out a powerful example to wealthy bodies similarly situated, which, we sincerely trust, will not be lost sight of under like unfortunate casualties.

Since the abandonment of the mines by the former adventurers, much work has been done in exploring the ore ground, and putting them into a working condition, the old men having, to use a common expression, "picked the eyes" out of her. At the 60 fm. level, a course of ore, 70 fms. long, west of James's shaft, was worked away, and the mine left poor; this shaft has been sunk to the 70, and the present sump is down to 7 fms. under the 70; a level has been driven west at this point for 70 fms. in extent, to meet the winzes going down from the 60, and a communication thus made, the several winzes being sunk from the deepest point of the old workings. The shafts are inclined, taking the declination, or underlay, of the lode, which is 3½ to 4 ft. in a fathom, and railways laid therein, whereby a waggon, containing 15 to 16 cwts. of ore, or attle, is brought to surface, being double the quantity drawn by the large machine-kibbles previously in use, and with a less expenditure of engine-power, not employing so much steam, and thus being economical in a twofold sense. A railroad has been laid in the 40 fm. level for a distance of 250 fms., so as to communicate with Wheal Sparrow, the rails being 25 lbs. to the yard, whereby 1 to 1½ ton of stuff is readily rollied. There has been also economy observed in the underground and surface operations, whereby work broken in the western part of the mine, at this and the more shallow levels, is brought back to a shaft near the dressing-floors, which have been skilfully arranged so as to make a number of terraces, for which the ground is admirably adapted; thus effecting a considerable saving in manual labour and cost of carriage on the ores. Five engines are employed, the largest being, we believe, an 80-in. cylinder, while the others are from 66 in. down. The monthly cost is, at the present moment, from 1800*l.* to 2000*l.*, and the number of persons employed about 450; of these 120, or thereabouts, are opening ground, 80 stoping the backs, and 75 tributers; thus giving support to from 1400 to 1500 souls, who, but for the spirit displayed by the Duchy, would otherwise have been, as we have already observed, in a state of destitution.

Too much credit cannot be given to the officers of the Duchy, and the several agents employed, among whom it is only an act of justice to name Richard Taylor, Esq., under whose control and direction the various works and improvements have been conducted, and who has been ably seconded by Captain W. Williams, of Wheal Friendship, and the local agents. It is now nearly 2½ years since the mines came into the hands of the Duchy, and there has been no lack of energy or money to place them in a good working condition, the returns at present being about four-fifths the monthly cost. The last sale for two months was 610 tons, averaging 47 1s. per ton, amounting to 2160*l.*, but the returns have since increased considerably; 350 tons are announced for next ticketing, and the present returns may be taken in round numbers at 1500*l.* to 1600*l.* per month. It is worthy of observation, that in the past 10 months 70 fms. of ground has been driven, at a cost averaging 9*l.* to 10*l.* per fm., being after the rate o 7 fms. per month; this is accounted for, by the ground being driven east and west from the several winzes at the same time. We have entered at greater length than was our intention, in speaking of the spirited conduct of the Duchy; but having had an opportunity of collecting the information which we have embodied in the preceding remarks, it would be an act of injustice if we did not direct the attention of lords and adventurers to the very praiseworthy conduct of the council of the Duchy. It will, we trust, stimulate others, and at once prove that however the Cornish miner may suffer from the importation of foreign ores, the Duchy sympathise with him, and hold out, by the example they set, inducements to others, and, so far as is practicable, mitigate the distress of those who, without such aid, might pine in penury and want.

By the directors' report, read to the shareholders of the Irish Amelioration Society at their first general meeting, on the 20th inst., an account of which will be found in this day's Journal, it is with much pleasure we find that, although of necessity somewhat slow, the progress of the society is certain and satisfactory, and bids fair to be established on a firm and permanent basis. A Royal Charter has been obtained, incorporating the society, and a Deed of Settlement founded thereon is before counsel for approval. Premises have been taken in Dublin, where several tons of peat-charcoal have been prepared, demonstrations of which as a deodoriser, and its great value as manure, will shortly be made in London: 30 acres of peat land the society are in treaty for at Derrymullen, on the bog of Allen, within 20 miles of Dublin, and with every facility for water carriage, and easy of access to the shareholders, who will thus be able to visit the establishment, and satisfy themselves on the various details of the manufacture and character of the undertaking. We have, from the first notification of the establishment of this society, felt warmly interested in its success, and it is particularly gratifying to see that every statement in the prospectus is likely to be realised, and a foundation laid for rendering the great mass of the people of Ireland industrious, contented, and happy. The great curse of the labouring population of Ireland has been the want of remunerative employment: oppressed by the division of the land into small tenements, which cannot be cultivated to a profit, and subject to the exactions of the middle men, he depends upon his potatoe patch for a miserable existence; his years pass by in unprofitable idleness, and his children are, as to the common advantages of humanity, little removed from the hogs with which they herd; there has been no stimulus to exertion, and an absence of all means of moral and social improvement. To bring about a better state of things this society is established—not to seek alms for the idle, but to establish 200 stations in different parts of Ireland, for the stowage of peat and manufacture of charcoal—which, while paying to the capitalist a good return for his investment, will circulate 1,000,000*l.* sterling annually for labour, in cutting peat alone, in districts where hitherto all has been barrenness, idleness, and waste; and, by the bringing into cultivation the land so cleared, eventually effectuate a complete moral and social change in the condition of the labouring poor of Ireland.

We are at all times advocates for the prosecution of mining operations, although we must confess we are far more disposed for home mines than foreign, which latter extract capital from this country, and take some of our best miners as practical men, and send in their foreign produce to the injury of our home mines. We have before us the prospectus of a company, which is announced in our advertising columns; and if ever a prospectus was issued which should call for remark, most certainly it is that to which we immediately refer. The prospectus under notice treats of the "Valley of Loëtchen Silver-Lead Mining and Smelting Company," the mines being in the Canton Du Vallais, Switzerland; and never, we believe, was a prospectus put before the public, couched in such terms as those to which we shall have more particularly to advert. In the first place, we have M. Pierre de Baglioni, concessionaire, president; we next have Gustavus William Blanch, Esq., managing director and purser: and here ends the list of officers. Proceed we now to the prospectus itself. It appears that a concession having been granted to M. P. de Baglioni, such has been transferred, with all materials, erections, minerals raised, &c., to Mr. Blanch. The extent of the sett, as stated in the prospectus, is about *forty-eight* miles north to south, and *twenty-six* east to west. We are told that the word mines is improperly used, inasmuch that "they are, in fact, mountains of mineral wealth." According to the prospectus, 2000 tons of silver-lead ore, rich in quality, are now at surface—"14 levels" having been driven, all producing rich ores, three of them being within a space of 47 feet. It not being stated in the prospectus as to whether the several levels were upon distinct and separate lodes, or whether they were at any specific distance in height—the mountain being represented at 7500 ft. in altitude, and the veins being traceable "by the naked eye," and which are also observable, if we may take the prospectus as an authority, some three miles from the spot where the levels are driven. From the prospectus, it appears that ore has been raised, but "the great difficulty to be overcome" was that of getting it down to the valley, either to smelting-works to be constructed, or to transport the same. M. Baglioni, the president, undertakes to contract at 2*l.* per ton for such transport.

The prospectus proceeds to state that during the past year 1000 tons of lead were imported into Switzerland, and without touching upon figures which are there introduced, and are in themselves absurd, we will proceed onward. An analysis is given of the produce, yielding 65 per cent. of lead, with 8 ozs. of silver per ton; and here we would particularly direct attention to a paragraph in the prospectus, upon which is founded the calculation as to profit which might be estimated—"the quantity thus to be raised would depend on the numbers of men employed, and the capabilities of the smelting works; but to avoid assumptions we will take the *results* of the 22 men now employed on the mines, and who raise 400 tons monthly." Before going into detail, it may be well to observe, that as 400 tons per month, being (say) 5000 tons per annum, can be raised, giving, at 20*l.* per ton, as stated in the prospectus, 100,000*l.*, the cost of labour in extracting the lead ore would be only 660*l.*, to which, however, is to be added the smelting charges and carriage; and thus, as it would appear, leaving a vast surplus to shareholders—the statement put before us as monthly returns, are 400 tons of ore labour cost 55*l.*, carriage 33*l.* 6s. 8d., smelting 1000*l.*, freight, &c., 400*l.*, salaries, &c., 211*l.* 13s. 4d., making 1700*l.*; the estimated value of the ores smelted is 4000*l.*, thus giving an *actual* profit of 2300*l.*, in addition to which there being 8 ozs. of silver to the ton: the prospectus calculates this, at 5s. per oz., being equal to 800*l.*, forgetting that there is a cost of something like 4 ozs. to the ton, by way of reduction charges.

It may be as well here to observe that, having had an opportunity of conversing with the *beneficiare*, we find that 22 men are not employed, and 400 tons per month are not raised—this assumed profit of upwards of 36,000*l.* per annum, from the employment of 22 men "*only*," however, is not all that is to be calculated upon; as we are told that "the workings can be carried on simultaneously at more than 100 levels." We are next told that the calculation for "smelting approximates closely to the usual charges for that operation on the copper ores of England," affording sufficient evidence of the innocence of the party who would talk of the relative cost attendant upon smelting lead and copper ores—being evidently ignorant of the smelting department—it being assumed that 2*l.* per ton would be required upon lead producing 65 per cent.; while 26s. to 30s. will bear the smelting charges on a ton of copper ore. Before proceeding further with the prospectus, which states that discoveries have been made that "cannot be exhausted in centuries, and of the most astounding magnitude," we would ask, how is it that none of the mineral, say 2000 tons, which, at 20*l.* per ton, would be equal to 40,000*l.*, should not have been realised; while the entirety of capital required is only 12,000*l.*, of which two-thirds is to be

applied to the erection of smelting works and the working the mines. It may be well here to cite the prospectus, in which we are told that "in entering into this concern, the word '*speculation*' scarcely arises to the most sensitive mind (!); besides the magnificent discoveries herein detailed, a property, equal to a dividend of 50*l.* per cent. on the whole estimated value (an estimation that with great reason could have been trebled or quadrupled) of 60,000*l.* will be vendable as soon as the ores already extracted are sent to market," &c. The prospectus refers to the ore having yielded in some parts 20 ozs. of silver to the ton, and proceeds to state that it will be conducted upon the Cost-book System, recognised by the Joint Stock Companies' Act, 7 and 8th Vic., c. 110, 63rd sec., whereby it is stated that this company is exempt from the operation of that statute, and bound only by the rules or regulations entered on the cost-book under proper legal advice.

We must here pause for a moment. The Cost-book System is one most important as regards the working of our home mines. It is that men should be honest, and that accounts should be rendered from time to time. The Stannaries' Court was founded for the protection of the miner and adventurers; and we believe, with the able jurisdiction, and course pursued in the court by the several advocates, much benefit is derived by the mining community. To so conduct the present mine, or any other away from the counties of Cornwall and Devon, appears to us to be absurd, as it cannot for a moment be supposed that operations in Switzerland can be in any way subjected to the Stannaries' laws as applied to Cornwall. This we think is sufficient, and perhaps may be considered as applying to other concerns, where the "Cost-book System" has been dragged in. One of the prettiest points of the prospectus is the following paragraph, which is too *rich* to be allowed to be passed by unnoticed:—"For the 12,000*l.* now sought, there will be issued to the subscribers 1200 shares, bearing interest from the 25th day of March next, at 6 per cent. per annum, which principal sum and interest shall be fully paid before any dividend is declared, when the interest-bearing shares will become ordinary shares, and take their proportionate part in the profits."

We are again here induced to animadvert on the prospectus before us. We are told that 6 per cent. per annum shall be paid to the shareholders on the payments made by them. Now, we would ask a very simple question, from whence the 6 per cent., or 6*l.* upon every 100*l.* subscribed, is to be obtained? Is it from the capital subscribed?—or is it from the pockets of the projectors?—or is it from the estimated profits arising from working the mine? If the first, it would be rather worse than railway diplomacy—if the second, then the projectors are more liberal than any we have yet found—and if the third, then it is a point on which, we confess, we should hardly like to advance an opinion.

In the prospectus to which we have referred we find an extract from a letter addressed by Joseph Smith, Esq., of Manchester, who had visited the mines, and can only say that we feel perfectly assured, had that gentleman ever imagined his letter would have gone into print, he would most certainly have revised it. We will give an extract, and then quit the subject, feeling that we have only pursued a duty which we consider imposed upon us—that of directing attention to mining operations, whether abroad or at home, and to the peculiar features that pertain to them. If the following paragraph be not sufficient to satisfy the most sanguine adventurer, then he must, indeed, be most unconscionable:—"Mr. Baglioni, jun., the discoverer and mining engineer at the mines, said he could, from *one* lode, with 20 men, easily raise 400 tons per month, and could with advantage drive several other levels, and increase his quantities very much. This multiplied by 14 (the number of lodes opened), would give 5600 tons per month (or 67,200 tons of lead, or 134,400*l.* per annum), and could be done as easily as possible, or even much more, if it could be smelted and profitably disposed of. I have a very high estimation of the talent of Mr. Baglioni, jun., as a practical miner; he possesses great geological knowledge, added to indomitable perseverance and good judgment."—We must say, Manchester is not the site from whence we should select a mining agent; but there are many Mr. Smiths.

If the number of Life Assurance Companies which have lately been formed is any criterion of the public opinion of the advantages which they hold out, it cannot be denied that they are viewed in a very favourable light. The system of life assurance is proposed to be applied to various contingencies, one of the most important of which is that of deaths and accidents by railway travelling; but another, which appears to us deserving of notice, is that proposed by Mr. Knight, secretary to the "United Guarantee and Life Assurance Company," Mr. Knight suggests the advantage of uniting public guarantee for persons appointed to offices of trust, with a policy of assurance upon their lives. In an interesting pamphlet,* just published by that gentleman, he enters into the subject in a systematic and able manner, and gives a clear explanation of the different forms by which guarantee is at present effected.—1. That afforded by private boudsmen.—2. The deposit with employers of a certain amount of money, as an *equivalent* for the surety required. —3. The guarantee provided by a public company. He points out the advantages and disadvantages of each, and concludes by observing that, "taking into consideration the advantages which the *union* of guarantee with life assurance presents, there is no description of security, as hitherto known, which secures so many and, at the same time, such important benefits in an economical and comprehensive point of view." He believes that the development of his plan will promote honesty, increase happiness, "and that the deserving will ever find a source whence to obtain an introduction to profitable occupation, and a fair and just reward for meritorious conduct." We recommend the consideration of the subject to every one officially connected with mining, railway, and other companies.

Our Aberdeen contemporaries have evidently been touched upon a weak point. If we have fairly driven them into a corner, we did not voluntarily provoke the opportunity, for we were clearly challenged by the *Herald*, who advised us to be instructed "a little better in the history, character, and constitution" of the "clique." We followed this suggestion, the result of which appeared in our Journal of the 10th inst., and really our remarks appear to have had rather an extraordinary effect, to have caused about three columns of unusual length to be written by way of an attempt to reply to us. First comes a production, locally known as the "*Banner*," which evinces a feeling of curiosity, not surpassed by the weakest of the gentler sex. The "Mrs. Harris" of the north puzzles herself to find out why we should take so much trouble about the matter. "A reason there must be, even for what may be accounted so inexplicable conduct as this, could we but find it out," exclaims the old lady. And why was she, poor old woman, "passed contemptuously over?" she asks again. Oh! what would she not give to learn all these secrets! But how amusing it is to see this "vixen" pouring forth her showers of slander on her neighbours (a frailty said to be common among old women), with far greater force than we were ever disposed to do; while, at the same time, she turns her harmless ire upon us. She tells us that she has by no means changed her mind "as to the character of the men's doings," but that they "proceeded too far, and too fast, in a career of unreasonable speculation, as having usurped a directing and dictatorial power in civic affairs, which they abused by seeking to rule the municipality for their own advantage, as if it were nothing more than a vast joint-stock association 'provisionally registered.'" She continues in this style, stating that in one instance the "clique" obtained their ascendency in a certain company "by a disgraceful ruse," but declaring, notwithstanding, that their projects in general have been productive of benefit. We ask, to whom? To the shareholders? to the general inhabitants of the town and neighbourhood? or, perhaps, temporarily to the "clique" themselves, and a few of their adherents? But, we must say, we question the propriety of concocting schemes with underrated capitals, estimated to pay "9½ per cent.," which, to the ruin of many, turn out to be perfectly erroneous. What, for instance, was the real cause of the difficulties of the Market and the Railway companies? A miscalculation of the amounts required to complete them, but which enabled the promoters to hold out the prospect, of "handsome annual dividends." We ask, then, would these undertakings (the former in particular) have been carried out, if the real state of the case had originally been stated? And if all these undertakings, including the Steam Navigation Company, have not been "unprofitable concerns to the partners," nor unproductive "of immense advantage to the community," why are they *all* at such *discounts*? The sounder the schemes, and the greater the benefits, the stronger the ground for assuming that they have been mismanaged, and, consequently, that the public have no confidence in the "clique." Really, from the recent display in the *Banner*, we do not think we were very far wrong in stating, that "the two or three papers in Aberdeen are all, *more or less*, under the influence of the 'clique.'" We have already accounted for the *Journal* and the *Gazette*, and the *Herald* is too notorious. We can easily imagine the feelings which operate on our provincial contemporaries in discussing their local affairs. It would be a pity to set them jarring with each other. But we are told that "few out of the district" are in any way interested in Aberdeen undertakings, and that, therefore, our remarks were entirely uncalled for. We think otherwise, even if the case really were so as to the number of shareholders not resident in Aberdeen. We do not think that "a few" ought to be kept in entire ignorance of their affairs. But we *know* that a very large proportion of the railway stock, as well as a considerable amount of other Aberdeen investments, is held in England; and, if the old lady will put on her spectacles, she will find that our title indicates our object thus—*The Mining Journal*, Railway and Commercial Gazette.

Then came our old friend, the *Herald*, on Saturday, with two columns in reference to our recent article, betraying the most unmistakeable signs of the awkward position in which it was no doubt unexpectedly placed. It has not the sense to perceive that, while we took our information of the railway meeting from its columns, we made our comments upon those facts, uninfluenced by its leading remarks, and that we referred to the letter as being written "under the influence of the defeated party of the directors." But our contemporary had lately the effrontery to assert that Mr. Spicer was the author of our articles on the railway affair, and it charged us with shameful partisanship in consequence. But with reference to the North British Australasian Company, we are told that the writer in the *Herald* went "directly to the cashiers" to ascertain his information "in an authentic shape—the report and minutes to wit;" while a *shareholder's* letter, requesting the same, must be laid before a board meeting before any answer can be given! Our contemporary must certainly be in particular favour in that quarter. Why should the directors employ a counsel to defend them. But with regard to this affair of the letter, it would only have been proper courtesy, and according to the rules of business, if the English shareholder had at once received an acknowledgment of this letter, with an intimation that it would be laid before the directors at the next meeting. We repeat that this, at least, should have been done.

Our contemporary then tells us that there have been schemes equally unsuccessful established in Aberdeen by other parties. But were they all promoted by the same men, acting in concert with one another? And how lamentable must be the position of those who can only defend themselves by referring to other parties, whose conduct, it is asserted, has been equally objectionable! The list it gives us is certainly a black one, and strongly proves the unfortunate influence that has worked upon the inhabitants of Aberdeen. But if "the more important of the companies referred to are really sound at bottom," the stronger is the argument that they have been mismanaged; and we scarcely understand our contemporary when he remarks—"The gentlemen called the 'clique' have reason to congratulate themselves that their list is not larger and blacker than it actually is." What can it mean by this? We do not like such ambiguous remarks; neither do we think its friends will thank it for such a mode of defence.

We cannot afford space to pursue the subject further this week; but we have many important queries to put to our contemporary, which we may take an early opportunity of doing. Among other points, it may give us some information of the North British Australasian Company, as it appears to be the official organ of that establishment; and, perhaps, it can enlighten the English shareholders of the railway and the other companies a little as to the origin and history of their property. Whether, for instance, so strenuous an advocate as the editorial writer in the *Herald*, is wholly disinterested, or may not have some past favours to be grateful for? The answer to this would make a vast difference in the value of his zealous endeavour to throw light upon these affairs.

IMPORTANT MINERAL CASE.

A case, Blackwell and Executors *v.* Turner and Macqueen, which has caused considerable interest among the owners of mineral property in the Peak district of Derbyshire, was tried in the Court of the Duchy of Lancaster. It appeared that the plaintiffs and Ann Turner are owners of certain mines in the liberty of Great Hucklow, in the King's Field. Plaintiffs' mines were known as Beech Grove, Beech Little Grove, and Kill Tom; and Ann Turner's was called Hill Top, all being on Hucklow Edge. The veins belonging to plaintiffs and defendants were separated by *rider* throughout their length. In the beginning of 1847, plaintiffs discovered that defendant's workmen had cut drifts through the rider, for the purpose of cutting ore from plaintiffs' veins. As soon as plaintiffs worked up to them, they turned defendant's party out of the mine. When Turner called a meeting of the grand jury of the Barmote Court, technically called *views*, charging plaintiffs with having committed trespass. Plaintiffs refused to answer these calls, as illegal; nevertheless, the jury assessed them in a fine of 12*l.*, and at a second meeting, in one of 20*l.* 2s. She then commenced two actions in the Small Barmote Court to recover the fines, and, notwithstanding the defence, that the Court had no jurisdiction, she obtained a decision in her favour. She afterwards presented a bill to the grand jury at the Great Barmote for 37*l.* 13s. expenses. Plaintiffs again contended the legality of the proceedings, but an order was made for the payment of the amount. Plaintiffs paid the total amount, 69*l.* 15s., to the Barmaster under protest, and gave due notice of the illegality of the proceedings. A bill was then filed in the Duchy Court to set them aside, repay the money to plaintiffs, and grant an injunction, restraining defendants from proceeding in the Barmote Courts, or driving any further cross-cuts through the *rider* into plaintiffs' mines. Before plaintiffs could get the Chancellor to appoint a day for hearing, other meetings of the grand jury were called, and verdicts obtained by defendants for various sums, which the plaintiffs treated as a nullity. When the case came on for hearing before Lord Campbell, Chancellor of the Duchy, the Lord Chief Baron, and Mr. Justice Wightman, the Court appointed Frederick Robinson, Esq., of the Inner Temple, barrister-at-law, on the northern circuit, as arbitrator in the case. The plaintiffs case was, that the whole of the proceedings in the Barmote courts, and before the grand juries, were not only unsupported by the customs, but, on the contrary, fraudulent perversions thereof, and therefore illegal and void.

The award has now been delivered, and in it the arbitrator awards and determines that the plaintiffs had good cause of suit against the said Ann Turner in respect of the matters in the said bill mentioned, and were entitled as against her to a decree of the court decreeing her to repay the said sums before mentioned, and enjoining her not to make any drift or cross-cut into plaintiffs' mines through the said rider, and not commence any proceedings against tplaintiffs in the Barmote courts, and that plaintiffs ought to have quiet possession and enjoyment of their said mines as against the said Ann Turner, and therefore he awards—"That no further proceedings be taken in the said suit, except such proceedings as may be necessary to carry his award into effect. That the said Ann Turner repay to plaintiffs the said several sums of 12*l.*, 20*l.* 2s., and 87*l.* 18s. That the said Ann Turner, her heirs, executors, administators or assigns, shall not make any further drift or cross-cut through the said rider into plaintiffs' mines; that she shall not commence or prosecute any further proceedings against plaintiffs before the grand jury, or any of the Barmote courts aforesaid; or commence any fresh proceedings, or further prosecute any proceedings which have been already commenced against plaintiffs, under pretence of any verdict in the great or small Barmote courts. Plaintiffs having agreed to waive any claim for the ore gotten by the defendant's workmen out of their mines, he awards that the said Ann Turner hath duly accounted to plaintiffs by agreement for all ore obtained by her out of their mines and shall not be called upon further to account." And as to the costs, he awards that each of the parties—plaintiffs and defendant—shall bear and pay such costs as he, she, or they, may have incurred in making surveys, plans, or models. "That the said Ann Turner bear and pay her own costs of suit and of the reference, and that she also pay to the said plaintiffs their costs of suit, and also their costs of the reference; and that the said Ann Turner also pay the costs of that his award."

The results of this trial have been expected with much anxiety, and received with satisfaction, as it has long been considered by mineral owners, that if the antiquated proceedings before the Barmote courts could be sustained as legal, mineral property in the King's Field would be valueless; for no title could stand good against any party who choose to claim, or take proceedings similar to those by the defendant in the present action.

Madrid, Feb. 15.—The affair of the quicksilver contract with Messrs Rothschild and Baring, will, very probably, cost M. Mons his portfolio. The *Clamor Publico* has provoked and sustains this polemic, and every day makes new revelations, which show plainly enough the morality of the minister. This affair is not so insignificant as it would appear at first sight, because it affects the interests of several high personages, and they will do all in their power to annul the contract.

* "Public Guarantee and Private Suretyship." By James Knight. Longman and Co.

Original Correspondence.

SUGGESTIONS TO AID IN THE IMPROVEMENT OF ELECTRIC TELEGRAPHS.

Sir,—By coating the wires with gutta percha, $\frac{1}{16}$th of an inch thick, such an insulation may be secured, as will protect them from the effects of fogs, rain, snow, and similar accidents, by which, at present, the communication is sometimes cut off for considerable periods. Rings, or slips of gutta percha, may also be employed with advantage to secure the wires thus insulated to the posts. Lightning conductors are at present employed at certain points on electric telegraph lines with good effect, in protecting the wires from the influence of lightning, and they might be applied with equal advantage along the whole line. A single conductor would be secured to each post on the opposite side to that on which the wires are fastened, and, the latter being protected by gutta percha, it would be impossible for the pyrogen moving along them to escape to the conductors. Or a double conductor, consisting of one on either side of the wires at each post, would be more useful (although considerations of economy might prevent its adoption), for a sort of arch would be formed over them, and the lightning, which, like other matter, requires space to move by, would find a more ready means of escape. But, whether single or double, the conductors should be of round iron; for, with square iron, the fluid is urged to the corners, the repulsion of its particles driving it to the greatest distance from the centre of any body on which it is collected or passing. With double conductors the points ought not to be more than three inches apart at the top, that the pyrogen may pass equally by each.

The experiments already before the public prove that gutta percha $\frac{1}{8}$th of an inch thick, is a sufficiently good insulation for the wires through the sea, and nothing but the means is now wanting to carry the telegraph from this country to France. Three or four wires may be employed this way by coiling them round a 2-inch rope, and keeping them about an inch apart, which will be more than sufficient to avoid inductive effects. This arrangement can be covered with canvas, and be pitched on the outside, to secure it from the action of the water.

Whilst on this subject, it may not be out of place to refer to an idea, which the bold genius of Franklin contemplated—namely, the possibility of effecting an electric communication between Europe and America. The greatest difficulty appears to be the depth of the ocean. This may, however, be overcome by the simple expedient of supporting wires by corks, not so as to bring them to the surface, but only to buoy them up sufficiently to prevent them sinking beyond a moderate depth. All strain upon them, arising from their own weight, would thus be avoided. I do not expect the currents of the ocean will present any great impediment, and it is well known that the effects of storms do not descend to any great depth, excepting those of long continuance.

Terrestrial magnetism is occasionally found to produce serious and long-continued deflections of the needles at the telegraph stations, a circumstance noticed in the report of Mr. Highton's paper in the *Mining Journal* of the 10th inst. This may be overcome by using two needles, instead of one, with their poles reversed, as in the galvanometer. J. J. Lake.

Royal Laboratory, Gosport, February 21.

OPAL—DIAMOND.

Sir,—I perceive, by the note of one of your correspondents, that an observation made by me at the meeting of the Society of Arts has been misunderstood. I made no allusion whatever to the *opal*; but, in reference to the diamond, observed that some specimens of that gem contained bubbles of air or fluid, as was often the case in *copal*, amber, and other vegetable substances of a like nature, and I mentioned Sir D. Brewster's optical experiments on the diamond, in corroboration of the statement.

Feb. 22. G. Algernon Mantell.

THE ELECTRO LIGHT—THE STEAM-ENGINE.

Sir,—Your correspondent, "T. A. E.," in the *Mining Journal* of Feb. 10, speaks of electricity as a power, within a few months, destined to supersede steam and the steam-engine. Now, I am not prepared to deny that electricity may, at some distant period, come into practical use; but this will not occur during the present generation. I have no doubt that the electro light will supersede coal gas long before the electro motive-power is generally adopted; and when I see a city lighted by the former means, I shall look for the speedy realisation of "T. A. E.'s" prediction respecting the latter. If the public can really comprehend the electro light discovery in all its details, and can follow out the peculiar methods and extraordinary improvements claimed by a host of jostling patentees, then I must confess that the schoolmaster has indeed been abroad to an unprecedented extent. If the struggling co-inventors can point out any advantages of national importance which are to be attained by the adoption of the electro light, then there would exist some ground for the excitement caused by this brilliant, beautiful, but inutile, discovery. The electro motive-power offers far more solid advantages; but it is only in embryo as yet, and will probably be the locomotive force by means of which ships upon wheels may one day traverse the Isthmus of Panama.

There are at present before the public improvements connected with the steam-engine—of whose importance the public are either not aware, or otherwise the spirit of envy and detraction is, as usual, busy to decry the merits of the inventor and of his works—I allude to Mr. T. Craddock and to his inventions. Here is a great and original inventor bringing forward his discoveries, which would benefit his country to the extent of saving millions of annual expenditure upon the soundest practical principles; yet no excitement is produced—no public interest is awakened—because the inventor, studying utility only, does not clothe his discoveries with the alluring tinsel which invests the electro light invention, whose brilliance seem alike to dazzle and bewilder both its projectors and those who listen only to the *ευρηκα* of each excited electrician. But for our northern and chilly climate, which would appear to forbid such an occurrence, I should not be surprised to hear that the streets of London had been visited by that kind of apparition which formerly astounded and alarmed the citizens of Syracuse; and that some modern philosopher, having succeeded in catching a sunbeam, has, under the excitement of the moment, and forgetful of all conventional rules of propriety, rushed madly along the metropolitan thoroughfares, announcing the naked truth to the amazed policemen who may attempt to arrest his frantic flight. It may be said of some of these talented, but not practical, philosophers, that *operose nihil agunt*; but Mr. Craddock's practice and theory together, have effected real and surprising improvements which I appreciate, and would gladly see them appreciated by those who possess the power to develope them extensively; they are, in fact, so pre-eminently great, that every opposition, which mean and interested motives can call into play, will, no doubt, be exercised to crush and disappoint the hopes and expectations of the talented manufacturer.—Robert Mushet: *Coleford, Feb.* 19.

IRON MANUFACTURE.

Sir,—In reply to "An Old Furnaceman," refinery cinders, the product of the common charcoal refinery, were smelled in the blast-furnaces of Dean Forest, before Mr. Hill was in existence. Bloomery cinders, as possessing the same chemical character with refinery cinders, and being equally with other iron slags included under the general term, *cinders*, as used by Mr. Booker, have been properly cited as an instance to prove that Mr. Hill did not originate the discovery attributed to him by the former gentleman. The character of Mr. Hill's iron has, I believe, at all times, been fully equal to that of any produced in South Wales; and latterly, as my father informed me, the quality of Mr. Hill's rails had been rendered *superior* to that of any other make, by the use of the process for improving the body and fibre of bar-iron, patented about 12 years ago by my father. If this process be still continued at the Plymouth Iron-Works, the bar-iron produced will necessarily be very far superior to any other iron produced by the ordinary processes. The quotation from my father's work, given by "An Old Furnaceman," confirms what I have advanced—viz.: that the man of original genius *discovered*, and the capitalists *developed*, the process of toughening and decarbonising iron by the use of lime.

Where refinery cinders are produced, it is, of course, very desirable to make use of them, instead of throwing them away; but, as another of my late father's discoveries, as far back as 1819, and carried into effect upon the scale of manufacture at that time, proved that there is no necessity for producing any refinery cinders at all; and as this opinion is at the present moment confirmed by the fact, that refineries are going out of fashion, as well they may, all this, I say, seems to evidence that the use of refinery cinders, and the production of good iron from them, can scarcely be considered as a discovery of national importance, though it has unquestionably been one of great private emolument.

The remarks of "An Ironmaker of the Third Generation" are not a

little curious—for setting aside my own opinion upon the matter, it appears from Mr. Booker's own words, that although he *visited* Mr. Yates's works, he overlooked "*the fact which is fully exhibited to the view of all travellers on the Midland Railway, near Chesterfield.*" Yet Mr. Booker is a shrewd practical man, and, perhaps, the very last person in existence to overlook that which *every traveller* can, *en passant*, at the rate of 30 to 40 miles an hour, so legibly read and comprehend near Chesterfield. It is some little consolation to me, assuming that I have over estimated the improvement of Mr. Yates, to know that an individual of Mr. Booker's knowledge and experience has fallen into a similar error, as appears from his speech at Swansea. Other ironmakers of note and experience have also fallen into the same error, and they are, with myself, indebted to "An Ironmaker of the Third Generation," for the remarks by which he has now cleared up the matter. Whether from the very remarkable *bird's-eye view* which he has taken of Mr. Yates's improvements, his remarks are, or are not, finally conclusive, I leave to your readers to determine each for himself.—ROBERT MUSHET: *Coleford, Feb.* 19.

STEAM CONDENSERS.

SIR,—From perusing the letter of your correspondent, Mr. T. Craddock, in last week's *Mining Journal*, on the subject of his steam condensers, I have been led to make a few observations on this important subject. The scientific truism stated by Mr. Craddock—viz.: "that the temperature in the air-pump is the determining cause of the amount of vacuum obtainable," is of great importance to be known. The injection principle of condensation, although good in its day, being at variance with this truism, must now be rejected. The fact stated by Mr. Craddock, that in his experiments the temperature of the vacuum was improved 15° by the motion of the condenser, in lieu of the water by which it was surrounded, appears to me to be much more attributable to the particular kind of motion than the fact of its being in motion: for instance, if it had a revolving in place of a reciprocating motion, very little advantage would, in my opinion, be gained, for the water, the cylinder, and the steam would all revolve together; whereas, by the backward and forward motion of the cylinder, the water and steam are in constant agitation, by which the hotter particles of the one, and colder of the other, are brought into contact with the metal; but, although motion may be an advantage to a condenser, arranged and constructed in a particular manner, and the one in question may be as good as any other in existence, with all due deference to my talented friend, I beg to submit that motion would not be requisite were the condenser arranged and constructed on correct scientific principles. Now, in order to obtain the most perfect condensation with the smallest quantity of water, it is evident that the condenser must be graduating—that the steam, on its way to the air-pump, must be constantly impinging against colder surfaces. I see no more difficulty in constructing a condenser in which that object might be secured than one on the present plan. That water is a bad conductor of heat, is proved by the fact, that the motion of the condenser, in the experiment alluded to, increased its power of condensing; and if the water channels were narrow, as exhibited in the sketch, which is intended for a vertical section of one side of a condenser, on the plan that appears to me likely to answer, I say, that if these water channels, or spaces between the cylinders, were narrow—probably not more than $\frac{1}{8}$th in.—the water at the top of the condenser might be nearly boiling hot, while that at the bottom would be cold. If the flange on the convex side of one cylinder, and that on the concave side of the other, were put on in the form of a spiral, so as for one cylinder to screw into the other, they might nearly fill the space between the cylinders, leaving only a small aperture for the steam to pass, by which it would be constantly thrown from side to side, as well as carried round with the screw. If the steam was first passed through an atmospheric condenser of a similar construction, and the furnace supplied with the condensed air, a considerable portion of caloric, now wasted, would be saved, the fuel and condensed water economised, and a more perfect vacuum secured.—JOHN WESTON: *Portland Town, Feb.* 19.

GOLD MINES IN NORTH WALES.

SIR,—I have lately noticed in your Journal several very interesting remarks on the gold mines at Cwm-heisian, and have, as a native of the principality, felt much interest in this important discovery. I am fully convinced that the operation of smelting and refining the precious metal has been carried on at Cwm-heisian in a most masterly manner by Mr. Edward Baldwin; and, far from any mismanagement, I can with perfect confidence state that nothing could surpass the systematic and careful manner in which this and every other branch of the workings has been carried out. Although Mr. Baldwin had great difficulties to contend with, I am happy to state that, by his untiring perseverance, he has overcome them all, and there is now produced upwards of 7 lbs. (troy) of pure British gold, which I believe to be the first ever known to be found in Wales. I now find that a great part of the 10¾ tons, spoken of in your Journal of the 10th Jan., was *not smelted*. The whole of the concentrated ore would have been refined had not the works been unavoidably suspended, in consequence of the unprecedented wetness of the season. The slight and temporary manner the smelting and refinery houses were constructed in, rendered a continuance of the operation impossible, the wet penetrating to such a degree as to prevent the working of the furnaces. So far from there having been any waste, it is my belief that every care was directed in a manner that could only have been effected under very able and judicious management.
Dolgelly, Feb. 20. CYMRO.

GOLD.

SIR,—The problem of gold in masses, under which form it is occasionally discovered, even lumps of several pounds weight, as in California, and, I believe, among the Ural Montains, is one of difficult solution. I cannot, however, doubt that such masses are the production of, and belong to, the attraction of cohesion or aggregation, in virtue of which force, *homogeneous* particles are agglutinated together—consequently, of a different character from that of chemical attraction, where heterogenous materials are consolidated. If arenaceous particles build up the indurated mountain mass of sandstone or quartz rock, why exclude the operation of the principle in reference to gold. No doubt these masses are formed of an aggregation of minute particles of gold, not consolidated by *fusion*, for that is hard to be believed in the circumstances under which they are formed in *alluvion*, but forced by external lateral and superincumbent pressure into a solid and homogeneous mass. The researches into the magnetism of bismuth, &c., may eventually throw light on these curious processes of consolidation.—J. MURRAY: *Portland-place, Hull, Feb.* 22.

ILLUMINATED GLASS COMPANY.

SIR,—Since my former communication, I have had an opportunity of verifying the importance of the application of the principle of the Illuminated Glass Company in the instance of the telescope, at Southampton. A telescope, thus illuminated, was extended from 70 to 88 feet, which was equivalent to 25 per cent.! One of Dolland's telescopes, *more powerful*, did not exhibit a vision equally distinct; but I am so satisfied of the immense advantage gained, whether single lens, or combined lenses in the microscope or telescope, that I shall adopt the principle in my own individual case.—J. MURRAY: *Portland-place, Hull, Feb.* 22.

THE EXPLOSION IN REGENT'S PARK.

SIR,—I frankly confess to you, that the cause assumed for the terrific explosion in Regent's-park, some time ago—namely, the escape of "gas" and the formation thereby of an explosive atmosphere, has by no means satisfied my mind, and circumstances that have lately been communicated to me, have tended to confirm that scepticism. No doubt, the ignition of the gas in the first instance was its *incipient* occasion; but the havoc and devastation which supervened, cannot be satisfactorily explained by an explosion of *any* proportional of commingled coal gas with atmospheric air. Its force would have been chiefly expended *upwards*; whereas the very foundations were torn up, and the devastation extended far and wide. The phenomena of the destructive powers of "gun cotton" will *alone* explain it. I learn that there was on the premises a warehouse of *Berlin wool*. If nitric or sulphuric acid, or a combination of both, were employed in the fabrication of these *woods*, or their colouring matters (often an admixture of *cotton* and wool), or nitrates and sulphates in any shape or form, employed in the manufacture of the colours, we can find no difficulty in assuming that there had been in this case the formation of *Xyloidin*.
Portland-place, Hull, Feb. 23. J. MURRAY.

VENTILATION OF COAL MINES IN THE NEIGHBOURHOOD OF BARNSLEY.

SIR,—The right principle of ventilation in this locality continues to be so imperfectly carried out, that it scarcely deserves the name of ventilation. In looking at the manner of the ventilation in some mines, I am forced to exclaim, what a mixture of ignorance, carlessness, and selfishness is presented. How awful to think on human lives sacrificed by scores without any efficient means being adopted to prevent such calamities. I say again, as I have before said, that Government should pass a law, imposing a heavier penalty than the imaginary saving which is obtained by frequent and gross neglect of duty. I believe this would be one of the best inspectors—not that I am opposed to Government *inspection*, so much as to Government *direction*. Government should *inspect*, but not *direct*, lest it take upon itself the responsibility, and so free the proprietor from blame. I will now point out the principle on which the mines under my own care are worked; and let me premise that, having only lost one man by fire-damp during a period of 20 years, although managing extensive works, that I feel warranted in speaking with a boldness from which I will not be deterred, either by fear on the one hand, or slander on the other. I would further premise that, as a manager, and the public at large cannot value too highly, nor admire too much, the liberality and magnanimity of the executors of the late Samuel Thorp, Esq., for their willingness on all occasions to submit to any expense, in order that the poor collier might be protected, and the public mind saved, from such shocks as have lately been felt. My plan of ventilation is the following:—The engine-pit and drawing pit are both used for downcast pits; and I have a cupola pit made as dry as possible for the return or upcast air. This pit is set apart for the sole purpose of an upcast shaft, having a stack of chimneys built on the top. I have double air-courses throughout the whole of the mine; and I employ a sober and steady man as fireman, whose duty it is to go through all the working part of the mine every morning, for the purpose of testing it, taking with him his most valuable friend—the safety-lamp. Having found all right, a signal is given for the workmen to descend. Our colliers all work with naked candles, except on some very particular occasions—such as the holing of an air slit, &c.—in which case a lamp is used. We have only two safety-lamps in a colliery—a number which I believe to be quite sufficient for any mine working the Barnsley bed of coal, if the ventilation were what it ought to be. Lastly, I will add the results of an experiment made in our Honeywell Colliery, Barnsley, on Tuesday last, Feb. 20th, for the purpose of proving the advantages of having two downcast shafts. The anemometer used on this occasion was the one invented by B. Biram, Esq.

With one downcast shaft the quantity of air passing through the mine per minute was 29,750 feet, at the rate of 9·6 miles per hour, and with the same temperature, and two downcast shafts, the amount obtained was 39,666 feet per minute, at the speed of 12·8 miles per hour, being an increase of upwards of 33 per cent. These experiments were conducted in the presence of the gentlemen whose names are appended, and who have much pleasure in bearing this testimony of their truth and correctness:—R. Jones, Esq.; Mr. C. T. Mence, solicitor; Mr. T. Ayre, surgeon; Mr. W. J. Hindle, architect; Mr. William Hopwood, coal proprietor; Mr. J. Firth, ditto; Mr. William Rowley, colliery agent; J. Batteson, Esq.; George Shore, Esq.; and George Senior, Esq. J. C. SUTCLIFFE.
Gawler Colliery, Barnsley, Feb. 22.

GOVERNMENT INTERFERENCE IN MINES.

SIR,—The unanimous opinion that now exists as to the benefits of wholesome measures being enacted by Government, cannot but be highly gratifying to every philanthropist. Often has the subject been laid before the readers of the *Mining Journal* by your worthy and practical correspondent, Mr. Mathias Dunn; and his views are, I am glad to see, being gradually acceded to by other practical men. I am daily more convinced that our magisterial and coronership system are vastly inadequate to the impartial and judicial administration of justice to the maimed and the relatives of the killed. Magistrates in this district are nearly nine out of every ten coal or ironmasters, and the coroners of the entire district are all solicitors—lawyers to the very coal and ironmasters, whom complaint is alleged against. The majority of the accidents could, if impartially investigated, be traceable either to the niggardly conduct of the master or the butty, in his determination to "get something" at all events. Some men embark in the coal trade, who, if they could be "summed up," would not be found with sufficient *bonâ fide* capital to carry the concern on creditably for one week. Your correspondent, Mr. E. Bagnall, in his letter of Dec. 5, very properly observes, before asking for Government interference, "whether everything has been done by the coalmasters and their agents that sound judgment could suggest." I would say, no; nor never would be without, in many cases, compulsory power; and if an accident occurs, in "taking the nearest cut," the onus is thrown upon a poor simple collier, who would become nearly paralysed at the sight of a magistrate or coroner. As matters now stand, there is no source through which either ground baliff or collier can, or dare, communicate any existing evil or danger; but the *collier* contents himself with remaining quiet, and seeing his comrades cut off from time to time through the same cause, until a suitable time arrives for him to resent his wrong—as in the time of a strike. What can have a more demoralising effect upon the mind of a collier than to see such indifference to his comfort and safety? Well he may resent it, when he has the opportunity. And what, I would ask, can be still more demoralising to them than the *butty* system? A man contracts to get the coals at so much per ton, and is allowed to humbug—if I may be allowed the term—the men how he pleases, and is supported in it by the master, because the more the men are made to do, the less charter the butty has; and the less charter paid to the butty, the more profit to the master—hence the futility of men complaining to the masters. An extensive coalmaster observed the other day—"I care not how the butty serves them—they deserve it all; *I* consider *I* have nothing to do with them, but with the butty alone; the price the butty can get my coals at is all *I* care about." The man that will drink most ale—and, in consequence, is the most foolhardy and reckless—at the butty's house, has the most work; whilst a *decent* collier, with seven or eight in family, does not have a quarter work. Monday is always a play-day, and becomes a drinking day; while a day's rest, in the *middle* of the week, would be threefold as beneficial to both men and horses.

Such are some of the principal drawbacks to mining enterprise, and peace and good feeling between man and master in this district, which I conceive nothing short of Government interference would check and eventually uproot; yet I think there will require great judgment in the selection of properly-qualified inspectors. They should have a local knowledge of their districts, and placed above depending upon any of the influentials, or, as the colliers have it, "the big uns," that he might exercise with sound discretion proper surveillance over whomsoever it may be, without fear.

I cannot exactly agree with one of your correspondents, that "a rise in the price of coals to the public is a natural consequence succeeding an accident;" that course would only prove beneficial to the neighbouring pits; but it is true that these severe losses are felt, more or less, by the inhabitants of the unfortunate districts, one and all. Hence the right, on the part of the public, to demand of Government a wholesome check upon the sad destruction of human life, regardless of the moneymongering propensities of the would-be unrestricted coalmasters. SOUTH STAFFORDSHIRE.
Dudley Port, Feb. 20.

GOVERNMENT INSPECTION OF MINES.

SIR,—The subject of *Government inspection of mines* has now been brought forward by the recommendation of more than one of the inspectors at Darley Main Colliery; and I believe there are few connected with mining operations but look forward with some interest to what Government may determine upon as a preventive system. It is recommended by some that the inspectors should advise, rather than command; and, by others, to arm them with compulsory power, otherwise they are of no use. To both of these systems of inspection I would object. To the first, on the ground of its being of no use; and to the second, that it is impossible, unless an inspector is placed for each pit. There are none, I do not care who they are, that can enter into the system, &c., about a pit without a *careful and regular examination*. There are peculiarities about every colliery, which require to be clearly known, as no general rule will be found to apply; and, in particular, I cannot imagine that colliery proprietors will be found to lay out 50,000*l.* over 100,000*l.* without having the slightest control over it, if an inspector is inclined to be troublesome. And who are they that will not have their pet ideas, without thinking of the proprietor's interest? Give an inspector full power, then *farewell to ingenuity and enterprise on the part of the manager*. But, instead of Government inspection of mines, would it not be a far more plausible system for Government to cause an inspection of managers of mines? Let Government appoint three or four of the most intelligent mining engineers, and cause them to go the round of the mining districts—say, once or twice a year—for the purpose of inspecting applicants as to qualification; and, if found possessing the necessary amount of knowledge, grant them certificates, so that they may be intrusted with the management of mineral workings; and also empower the inspectors to take such certificates from those who may be found committing gross and glaring mistakes. If it is considered proper that Government should interfere with mining operations, perhaps an arrangement, something like the above, would tend to improve; but if a regular inspection of mines is considered necessary, it will require hundreds of inspectors, so that there may be the slightest chance of improvement.
Feb. 19. N. B.

LOSS OF LIFE IN COAL MINES.—THE ELECTRIC LIGHT.

SIR,—The Darley Main explosion having again drawn public attention to the serious loss of life in coal mines, must form my excuse for troubling you with a few observations. "The Black Diamond," in the *Mining Journal* of 10th inst., makes some very sensible and useful remarks, and evidently understands the subject on which he writes. Such a letter, from a practical man, is worth a host from persons unacquainted with coal working, but who yet *fancy* they can give instructions on the subject.

If Government inspectors are to be appointed, let us have men with a proper practical knowledge of what they undertake, otherwise they will be worse than useless, and do positive harm. They ought also to be perfectly conversant with the necessities of the locality which they are appointed to inspect, otherwise they may wish to introduce systems of working totally foreign to the wants of the locality. Again, would they not lessen the vigilance of the agent, by taking the responsibility off his shoulders? Explosions will, it is to be feared, still continue to occur, even if the greatest possible care be taken. The great desideratum in coal mining is a light, from electricity, or other similar means, which would not ignite the gas when brought into contact with it. If the electric light could be made portable, it would be the greatest boon ever bestowed upon the collier, as it would be at once the death blow to all explosions. J. T. W.
Nantyglo, Feb. 20.

VENTILATION OF MINES.

SIR,—I observed, in your notices to correspondents in last week's *Mining Journal*, an allusion to my mode of ventilation, which I shall be happy to explain. The doors mentioned consist each of a wood or iron frame, having wrought-iron bars ½ in. or ¾ in. apart, to prevent the air from rushing in after an explosion, and thus destroying the works; it is hung securely on hinges, sufficiently strong to withstand the blast, having a projecting plate of iron downwards, of 3 in. or 4 in. wide, to enable it to resist the first impulsive force; the blast will raise the door, and on the air returning to fill up the vacancy of that which is destroyed, the door closes, by the operation of a balance arm to an angle of about 70°, which takes place when the atmospheric equilibrium is restored; the fatality of the after-draught is too well known to need any comment here. As regards my stoppings, their effects are certain in the mines of this and adjoining counties, and I have no doubt would be so in any of our coal mines. They support the current of air, and thus clear the works as the contents are burned off; numerous parties conversant with coal mining have borne testimony to their worth.—W. HEATH, C.E.: *Hanley, Staffordshire, Feb.* 21.

THE MINER'S LIFE ASSURANCE.

SIR,—In your Journal of the 27th January, you mentioned the laudible efforts you had made "to establish a society, whereby the widows and orphans of those miners whose lives are sacrificed in their employment underground, should be protected, having lost their only support and hope from the fearful accidents in mines and collieries." That such a proposition should not have been received with the cordial assent and strenuous co-operation which its great importance deserves, is to be deeply regretted. There can be no doubt but that such a society is much wanted, and that it would tend to alleviate great destitution and misery; the necessity for it has been evidenced on the occurrence of almost every explosion, by which a great number of lives have been lost. Public subscriptions have been instituted, and cheerfully and liberally responded to. In the lamentable instance which has so recently happened, an appeal to the benevolent has realised 1300*l.*; and, there is little doubt, but that if some well digested plan was brought forward for a permanent self-supporting institution, or one partly assisted by annual subscribers, it would now meet with more attention and better encouragement than has attended previous attempts. Such an effort is, at least, worth trying; for it ought to be borne in mind, that those killed in our mines by explosions unhappily constitute but an inconsiderable portion of the loss of life which happens in them. In the mining districts, deaths from falls from the roof, accidents in the shafts, and from other causes, are constantly happening, and the want and suffering which is endured, in consequence, by the widows and orphans of the sufferers, is to a much greater amount than that of those who are killed by explosions. The afflictions of this class are unknown to, and unalleviated by the public, whilst their claims on its sympathy and assistance are equally urgent.

There are also many who are incapacitated from earning a livelihood by fractures of limbs, contusions, and burns, received whilst pursuing their daily work underground, and who are equally entitled to the benefits which such an institution would confer. An assurance company has been established "for the purpose of applying the principle of life assurance to journies on railways, and to ensure compensation in the event of death or injury resulting from accidents during transit, on the payment of a very small sum in addition to the fare." It is worthy of consideration how far this plan can be modified so as to apply to accidents in mines. The absence of exact statistical information presents some difficulties to the development of such a scheme, but were those of your correspondents who are well versed in the subject of life assurance to devote their attention to it, they might, possibly, obtain as much approximate data as would serve to prove the expediency of such a scheme.

So far back as in 1697, the keelmen (or bargemen) of Newcastle-upon-Tyne, instituted among themselves a society of this kind. In 1700 they expended 2000*l.* in building an hospital for their decayed members, and for the widows and orphans of their deceased members. They made a weekly allowance to their sick and superannuated members, and to the widows and orphans, varying from 5*s.* to 1*s.* 6*d.* per week. The funds were contributed by the members paying 4*d.* per tide, which was equal to a 1*d.* per Newcastle chaldron of 53 cwts., on all coal conveyed by them on the river. The proceeds were afterwards augmented by the contribution of one farthing per chaldron, by the owners and lessees of the collieries on the Tyne. The payments, therefore, were less than ½*d.* per ton, for which a comfortable provision was secured for the old age and the dependents of the keelmen. In 1704 there were 400 keels employed on the River Tyne, in the coal trade, and about 1600 keelmen. By the extension of colliery railways to the shipping berths, the labour of this class has been in a great measure superseded, but the keelmen's hospital still remains, though diminished in its funds and usefulness, as an instance of the good resulting from the combined efforts and prudent foresight of an industrious class of men. This shows how much may be done by an aggregate of small payments, even on a comparatively small scale. A more extensive application of the plan would be equally, if not more beneficial.

The quantity of coal now raised in the United Kingdom is said to be 30,000,000 of tons. Supposing the colliers to contribute a ½*d.* per ton on this quantity, a fund amounting to 62,500*l.* would be realised. A proportionate contribution from the iron, lead, copper, and tin miners would, probably, raise the amount to at least 100,000*l.* per annum, which, it is presumed, would be amply sufficient for the purpose. As the men employed in a colliery are about equal to one man per ton per day, the tax would only amount to about 3*d.* per week on each person employed, which might be deducted from his wages, and paid to the parties appointed to receive it, by the coal owner. The expenses incurred in the collection, management, and distribution of the funds, might be defrayed out of the voluntary subscriptions made by the mine owners, and others interested in this valuable class of men.

The expediency of having but one national institution, or of establishing a society in each district, and other details, may be afterwards discussed and determined. It is presumed that enough has been said to show the necessity there is for some such scheme, and to invite the attention of all interested in mining to the importance of the subject. There are, doubtless, many difficulties to be overcome, and, probably, much apathy to be encountered from those interested; yet the great good that would result from the success of an attempt to engraft such institutions into the mining system of this country, is well worth the strenuous and persevering exertions that may be required to achieve so desirable an object.
Neath, Feb. 19. J. RICHARDSON, C.E.

MONMOUTHSHIRE AND GLAMORGANSHIRE BANKING COMPANY.

SIR,—In reply to your "Forest of Dean" correspondent, the Monmouthshire and Glamorganshire Banking Company was established on the 1st August, 1836. The original prospectus is headed thus:—

"MONMOUTHSHIRE BANKING COMPANY.—Capital 500,000*l.*, in 25,000 shares, of 20*l.* each.—This company has been formed for the purpose of carrying on the lucrative business, hitherto conducted as a private bank, at the three towns of Newport, Pontypool, and Chepstow, with ulterior views of extending the establishment, *by purchase of the interests of existing bankers*, or otherwise, through the whole of the neighbouring districts. The clear profit of the three banks above-mentioned, for the year ending Dec. 31, 1835, was at the rate of upwards of 20 per cent. on a paid-up capital of 50,000*l.*," &c., &c.

On the 1st of April, 1837, another prospectus appears, embracing, in addition to the banks at Newport, Pontypool, and Chepstow, branches at Usk, Monmouth, Abergavenny, Tredegar, Lydney, and Cardiff. This prospectus announces that "the original partners (*kind men*) still continue solely to superintend and control the ledger accounts"—these services being "gratuitous."

In May, 1838, is a *third* prospectus, where we find a branch at Bridgend; subsequently another at Swansea. "The banks are still managed by some of the partners in the old firms, and are conducted on the same principles of privacy and honourable confidence (!!). Three half-yearly dividends, at the rate of 10 per cent. per annum, have been declared since the formation of the company, and a reserved fund of 6000*l.* has already accrued out of the surplus profits." At this period the capital of the bank appears, by the prospectus, to amount to 155,710*l.*, 50,000*l.* thereof being held by Messrs. Jones and Blewitt—105,710*l.* by the public. The subscribed capital of the bank, at the present time, may be known on application to the head manager, John Fraser, Esq. The following branches have been closed, and the business discontinued thereat—viz.: Swansea, Bridgend, and Cardiff, in Glamorganshire, being the entirety of the concern in that county, and Lydney, in Gloucestershire. The rate of dividend, for several years past, has averaged about 6 per cent. per annum, on shares costing originally 15*l.* each, and since at 12*l.* 10s. each. As a set off for the curtailment of the banking business, by the closing of the four branches referred to, the company, for the last five or six years, have been carrying on the Victoria Works. The profits arising from this branch of the concern are, for obvious reasons, kept in the back ground. The shareholders, however, congratulate themselves by the assurance afforded them on the 14th inst., by Mr. Fraser, that every half-year has left a balance of profit, from carrying on these works, satisfactory to the directors.

The next, and last, inquiry of your correspondent is, "What is the present price of shares in the market?" A reference to the "transfer" book would show the latest transactions. In the absence, however, of such reference, it may be stated that, after the close of the half-yearly meeting on Wednesday last, one of the trustees of the bank offered 4*l.* per share for 20 shares to the gentleman who made himself so obnoxious to the directors, managers, &c., of the bank, by moving an amendment thereat—it is presumed, with the object of getting rid of one who was troublesome.

The capabilities of the Victoria Iron-works were reported upon, for the then proprietors, by the late David Mushet, Esq., of Coleford, at the close of the year 1841, in shape of a pamphlet, the perusal of which is well worth the time and trouble of taking. It is considered one of the ablest, fullest, and best reports ever made by that gentleman, than whom the kingdom never yet produced one more capable for such a duty.

Newport, Feb. 20. —— "NOT THE WITCH OF ENDOR."

SHREWSBURY AND BIRMINGHAM PREFERENCE SHARES.

SIR,—Can you explain why the Shrewsbury and Birmingham preference shares are below their value, as compared with that of the Shrewsbury and Chester? I see the latter quoted at 5*l.* premium, but the former have not yet reached 2*l.* Supposing both to be in receipt of dividend, the difference in this premium ought to be only that which the lesser amount and rate of interest of the Shrewsbury and Birmingham shares should produce, and being a simple arithmetical calculation, may be stated thus:—Amount of Shrewsbury and Chester shares, 10*l.*: amount of Shrewsbury and Birmingham shares, 8*l.*—8 Shrewsbury and Chester, dividend 7½; Shrewsbury and Birmingham dividend less than the equivalent for 10 years, at 8 per cent. and 6 per cent. thereafter in perpetuity—or 80 : 58:: 5*l.* Shrewsbury and Birmingham: 3*l.* 12s. 6d. premium, the relative value of Shrewsbury and Birmingham preference shares, supposing them to be in receipt of dividend.

The present report of the Shrewsbury and Birmingham states, that their line will be opened on the 1st day of August next, but take nine months' dividend off, and you still have 3*l.* 3s. as the premium at which Shrewsbury and Birmingham preference shares should stand, in order to bear their relative value to Shrewsbury and Chester. The question of the legality of the shares is pretty well set at rest by the dismissal of the bill filed against the company; and the report of the directors states that it will be placed beyond doubt by a clause in their bill at present before Parliament; and it may be taken for granted, that the Shrewsbury and Birmingham line, when opened will be in receipt of as good an income as the Shrewsbury and Chester; and having borrowed only 720*l.*, the preference dividend must be sure, beyond the possibility of doubt.—COCKER: *Feb.* 22.

TIMBER TRACK-ROADS.

RESPECTED FRIEND,—In reply to your correspondent, J. Richardson, I have only to observe, that his statements have not in the least shaken my confidence in the plan I have proposed, which is widely different to anything that has yet been tried as tracks, and which I hope shortly to be enabled fully to demonstrate, and also to show that J. Richardson's objections to timber may be effectually obviated, so as to render it, in some respects at least, superior to either stone or iron, especially as regards inclined planes.—THOMAS MOTLEY, C.E.: *London, 2d mo.* 20.

STEAM LOCOMOTIVES ON COMMON ROADS—TIMBER TRACKS.

SIR,—Mr. Motley's reply, in your valuable columns of the 3d inst., to my remarks on Mr. Clarke's report on Sir James Anderson's steam locomotive for common roads, is so absurd a production, that I did not think it worth a line in reply—it being totally innocent of a single observation in satisfactory answer to any of the points I noted, and being only remarkable for its abusive language—quite unbecoming one of the "respected friends." I never accused Mr. Clarke of possessing a disposition such as described by Mr. Motley, nor had I the least wish to injure him in the slightest degree, but merely to point out facts which had come within my own personal experience. Talking of schoolboys, it almost appears to me that your correspondent, from taking up the subject so warmly, fathers the report in question, and patronises Mr. Clarke's name, as *Fagin*, the jew, patronised poor little *Oliver Twist*, for his own purposes. For all Mr. Motley's sneers, I shall not let my name appear in this matter; and he must be aware there are many circumstances which render such publicity inconvenient. It is sufficient that the Editor knows his correspondent; and I consider Mr. Motley's observations as tending to cast a slur on your judgment and caution. I should not further have noticed the subject; but seeing a communication from Mr. Richardson, C.E., of Neath, in your last week's Journal, on timber tracks on common roads, I wish to record my perfect acquiescence with his remarks, as to the certain failure which would ensue from their adoption—an opinion founded on considerable experience; and, as Mr. Motley has so strongly recommended them as infallible, in several communications to the *Mining Journal*, much misconception as to their lasting and economical properties may ensue. In addition to the evils pointed out by Mr. Richardson, I would add that, after heavy rains, particularly in hollow ways and valleys, the water would get beneath them, and, by the passing of the traffic, they would become loose, and in many cases absolutely float. That scarcely the same subsoil could be depended on for a mile together, and, consequently, from different firmness in the bearings, a series of undulations would ensue, and consequent repairs be necessary; and if, to remedy this evil, a deep channel be dug to form a firm concrete foundation, the expense would exceed the advantages gained, and then the tracks not be secured against the effects of wet. When we add to this, the opposition to be encountered from parishes and road trusts, the enormous expense of a fresh Act of Parliament for every district to be run over, and other serious difficulties, I think it must be clear to every thinking mind that, unless the locomotive can be made to run on a good Macadamised road, the day of its success is far distant. Even if tracks were laid down, and in themselves were practicable, they would be useless, unless an Act of Parliament could be obtained to secure them solely to the use of the locomotive, or constant interruption and delay would occur from the interference of slow horse-vehicles. To show that my only object is the adoption of true principles, I will endeavour, in a future communication, to explain the various causes of failure which has hitherto taken place, and what are the essentials for securing success of steam-engines on common roads.

Rotherhithe, Feb. 21. A ROAD LOCOMOTIVE ENGINEER.

PREVENTION OF ACCIDENTS IN MINES.

SIR,—It was with great satisfaction that I read, in last week's Journal, the several letters of your valuable correspondents upon the subject of the recent lamentable loss of life at the Darley Main Colliery, near Barnsley, and the suggestions contained in those letters must prove of the greatest advantage in the cause of humanity. Although you drew a frightful picture of the loss of life during the last twelve months, in your paper of the 27th January, in which you detailed the apathy you and your honourable coadjutors had met with in the west of England, in your praiseworthy endeavours to ameliorate the dangers the working man is daily liable to, I think, on the other hand, you have now fair reason to congratulate yourself that a brighter day is dawning; and, if we are to judge from the sentiments I have alluded to, as well as from the evidence of such gentleman as Mr. Nicholas Wood, Mr. W. Smyth, and others, surely it must be gratifying to you to feel that your powerful aid has not been totally unheeded. The conversation that took place last week in the House of Commons must convince all impartial men of the anxiety of the Government to lend their assistance to any feasible measure for the prevention of similar accidents to the one so recently and painfully forced upon the public notice. If Government adopt the suggestion, and appoint inspectors in the several mining districts, there is little doubt but that the selection will be made of men competent for the arduous duties, and fully aware of the nature of all the accidents which a miner is daily and hourly liable to. An analysis of the cause of death to these 526 poor creatures would show several other causes equally fatal as explosion; so I hope you will continue your noble exertions in support of the poor man, until some means are devised to protect him from loss of life when a rope or chain breaks, and also from the frequent occurrence of death from the *alleged* falling of coal—a circumstance passed over by that general term; but too frequently caused (in the midland counties in particular) by the total want of guides of some sort to prevent the oscillation of the load, and for the want of which many a piece of coal is detached from the corve, and frequently proves fatal to the man at the bottom of the shaft, and which would be greatly diminished by the adoption of guides. Entreating you to persevere in the good cause, I am, yours, &c.—A CONSTANT READER: *Sunderland, Feb.* 22.

NEW ROAD LEVEL.

SIR,—In your last week's Journal there appears a statement, to the effect that Messrs. Mushet never worked this colliery. This statement is untrue, and calculated to mislead the public, and injure the sale of the property. Messrs. Mushet have worked this colliery before and since the date of their agreement with me, and sold the coal raised in April and May last to Messrs. Gollop and Ridler, of Lidney. As regards the three years' rent due, they will find the claim is founded both in law and honesty, and they will be obliged to pay it without further delay.—WILLIAM COURT: *Monmouth, Feb.* 21.

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THE ELECTRIC LIGHT—M. LE MOLT'S VOLTAIC BATTERY.

[Translated from a *mémoire* in French,* by M. Le Molt.]

The principal points of perfection in a voltaic battery requiring *intensity*, consist in obtaining the freest, amplest, and most continuous powers of production and propagation of electric currents, by means of elements whose opposing surfaces offer the least superficial extent. The new *galvanic pair* which I presume to submit to the examination of the scientific interested in the matter, seems to me, in the present state of our knowledge, to embrace such conditions. The improvements, or objects of detail which constitute together the requisites which I considered essential, are as follows:—

1. An electro-negative element of carbon, called the *gas carbon* of the retorts.
2. The application of the *electrotype*, or *galvano-plastic* process, to cover, with a surface of reduced metal, one of the extremities of the carbon element, as the means of effecting an immoveable fastening.
3. The coating, with a resinous or other varnish, to preserve from the destructive action of the acids, the non-effective surfaces of the electro-positive metal.
4. A new mode of fixed and intimate connection between the two electric elements by a conductor, which I call the metallic *Anse.*†

CARBON ELEMENT.—Every one knows that there exists a great number of different combinations of metals, capable of forming galvanic pairs or chains, classified in the following order:—*Platina, gold, silver, mercury, copper, lead, tin, iron, zinc*, and that the more distant in this series from one another the two relative metals may be, the more intense is the current they yield; consequently, according to this law, the most effective battery will be that whose elements are composed of platina and zinc. But there remains a non-metallic substance—*carbon*—whose efficiency as an electro-negative element is still greater than that of platina; so that the carbon and zinc pair is counted amongst the number of combinations which afford the strongest generative action that we have heretofore succeeded in producing.

Nevertheless, till the present time, the inconvenience attached to the use (so short in duration) of this desirable element, have led to its being rejected as useless in the very circumstances where it could render the greatest service—the immense productive faculty becoming gradually weakened from a cause which I shall now point out. From 1840 to 1842, in experimenting at St. Petersburgh on the electro light, with a battery of Chevalier Bünsen of 100 pairs, whose carbon element, in the form of a hollow cylinder, was composed of a mixture of coke and coal, I soon perceived that the gradual diminution of the current of this pile was occasioned by the rapid oxidizing of the copper bands, as well as of the screws employed to bind them to the upper surface of the carbon element. In effect, the acid in which this particularly brittle and porous carbonaceous matter was immerged, had rapidly risen and attacked the exterior, and, more especially, the interior surfaces of the connecting band, and had formed at the few points of contact between the band and carbon metallic oxide, which intercepting the free passage of the current, reduced rapidly its intensity. Moreover, the screws of the connector, corroded by the acid, could no longer, save with difficulty, move in their places, by reason of which, after every experiment, it became necessary, by a troublesome operation, to remove the oxide from the bands and screws, the latter of which becoming in the end altered, led to a separation of the parts, and intercepted the free circulation of the current. This rendered the electric light intermittent and weakened in its effect, and often lead even to total extinction. I was, therefore, coerced to abandon, as so many others had previously done, the employment of this battery.

Then I resorted to the platina element of Grove—certainly the surest and most intense that then existed; but which was liable to two objections. First, the cost of the metal—the plates of which, on account of the propagating power of the current, were required to be of a certain solidity; secondly, that in the end, this metal is found to be subject to a very sensible reduction in its substance, especially when the acids, heated by the action of a powerful battery, became elevated to a certain temperature. Although it is well known that pure nitric acid has an almost imperceptible dissolving effect on platina, yet pure and well rectified nitric acid is extremely dear, and on that account we are obliged to employ as a substitute the nitric acid of commerce. This is almost invariably impure, or adulterated—being amalgamated with other acids, with which it forms a kind of nitro-muriatic acid (*eau regalé*), weak it is true, but nevertheless acting as a dissolvent. The fact is that, after about 20 experiments, the mass of platina used for 100 pairs, and weighing about 3 lbs., had lost 4 ozs. of its weight. The truth of this was ascertained as well by the celebrated Jacobi.

On my return to France, I introduced, as an element of the pile, the peculiar carbon called the gas carbon of the retort, commonly known under the name of *retort scalings (crasse des cornues)*—a substance which is formed and deposited over the interior superficies of the retorts, from the distillation of the coal, or other matter capable of being reduced to the state of carbon. This material has been long employed under the shape of pencils, or stems, as *electrodes (électrodes émetteurs)*, for producing electric light. I had a battery of 80 sets constructed, and I had the disappointment to observe, in the employment of this carbon, the same obstructions in one respect as with the battery of Bünsen—viz.: that the fastenings and screws which held it were similarly attacked by the acids. Here, however, it is true the acid no longer found in the *gas carbon* (remarkable for its density) a sufficient capillarity to assist its ascent to the fastenings; but the acrid and heated vapour disengaged had the same effect of oxidizing the metal.

[*To be continued.*]

TELEGRAPHIC COMMUNICATION BETWEEN AMERICA AND EUROPE.—Amongst the miscellaneous proceedings of the United States Congress are projects to establish a telegraphic communication across the Atlantic to Europe, to form a similar line across the American continent, and also a project to form a line of railway from the Lakes of Michigan to the Pacific.

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* We do not recognise the propriety of circulating a description in French for the purpose of placing before the public an invention to be adopted in this country. We trust that we may not in future be called on to regard this as a precedent.

† *Anse* literally means, the curved or annular handle of a basket, jar, &c.; and the term in geometry is used to denote a series of eccentric curves. "*Anse-de-panier*" seems by no means expressive of the object to which it is here applied, which conveys rather the idea of a bridge. Inventors should be required to conform to the usages of established scientific language, otherwise we shall be inundated in a few years by a host of unmeaning words, which will lead to the greatest confusion, from which even to-day we are removed but a short distance.

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TO ENGINEERS AND BOILER MAKERS.—The

BIRMINGHAM PATENT IRON TUBE COMPANY

MANUFACTURE PATENT LAP-WELDED IRON TUBES (under Mr. R. Prosser's Patent) for Marine, Locomotive, and all Tubular Boilers. Also, TUBES for Gas, Steam, and other purposes. All sorts of IRON GAS FITTINGS.

67

WORKS—Smethwick, near Birmingham.

LONDON WAREHOUSE—No. 6, Upper Thames-street.

TO PUBLIC COMPANIES, MERCHANTS, MINERS, &c.

—EVERY DESCRIPTION of ACCOUNT BOOKS requisite for the COUNTING-HOUSE or BOARD-ROOM, manufactured to any pattern and ruling, hot-pressed, and bound in the most durable manner (paged in type, without additional cost), on a scale of charges reduced to meet the times.—WRITING PAPERS, ENVELOPES, and STATIONERY, of the very best description, on the like reduced scale. Lists on application.

68

F. W. RALPH, COMMERCIAL STATIONER,
36, *THROGMORTON-STREET, BANK, LONDON.*

PORTER'S PATENT CORRUGATED IRON BEAMS,

GIRDERS, and FIRE-PROOF FLOORS.—These BEAMS and GIRDERS are about 30 per cent. lighter, and 20 per cent. cheaper, than any others of wrought-iron.—The FIRE-PROOF FLOORS, although not more costly than those of cast-iron, with brick arches and concrete, give greater security from fire, with less than one-tenth of the weight.—MANUFACTORY—IRON BUILDING & ROOFING WORKS, SOUTHWARK.

69

OFFICE—2, ADELAIDE-PLACE, LONDON-BRIDGE, CITY.

DUNN'S WINNING AND WORKING OF COAL MINES.

—A FEW COPIES are still on hand at Simpkin and Marshall's, Stationers' Hall-court; Weale's, 59, High Holborn; and at the office of the *Mining Journal*, 26, Fleet-street, London. The work is now interesting, as containing dissertations upon legislative interference for the saving of life.

70

Published this day, price 1s.,

RAILWAY TAXATION. By S. LAING, Esq., chairman of

the London, Brighton, and South Coast Railway Company, and late secretary of the Railway Department of the Board of Trade.

71

Vacher and Sons, 29, Parliament-street.

Just published,

GEOGRAPHICAL AND MINERALOGICAL NOTES, to

ACCOMPANY Mr. WYLD'S MAP of the GOLD REGIONS of CALIFORNIA.

72

London: Published by James Wyld, Geographer to the Queen and Prince Albert, Charing-cross East, and 2, Royal Exchange; and Simpkin & Marshall, Stationers'-court. Price One Shilling; with Map, Three Shillings.

THE MINING ALMANAC.—In the absence of the Parlia-

mentary Returns, the publication of this work has been necessarily delayed; it will, however, appear in the course of a FEW DAYS—containing much original and statistical matter, occupying upwards of 400 pages.

73

25, Fleet-street, Feb. 22, 1849.

CARNE'S BULL HOTEL, 92, BISHOPSGATE-STREET-

WITHIN, LONDON.

GEORGE CARNE, in announcing the REOPENING of this long celebrated HOTEL, which has been newly furnished, painted, and decorated throughout, begs to assure his friends, and strangers visiting the metropolis, that every effort will be used to afford them all the comforts of home. The Sleeping Apartments, to which especial care has been directed, will be found equal to any in London, whilst the following List of Charges will show that every thing is conducted on the most economical scale.

Bed and Breakfast, 3s. per day; Dinner of two courses, and imperial half-pint of wine, at the ordinary, at half-past One, 2s.; private sitting-rooms, from 2s. per day.—Fixed charge for servants.

74

Porter and female attendant in waiting, for all the trains.

Wines, of the highest quality, drawn from the wood.—Plymouth Gin, and all other spirits, of the purest quality.

N.B.—Mine Agents having *bonâ fide* valuable Setts to bring before the public, will be introduced to parties likely to advance their interests.

STEAM TO INDIA AND CHINA, VIA EGYPT.—Regular

MONTHLY MAIL (steam conveyance) for PASSENGERS and LIGHT GOODS to CEYLON, MADRAS, CALCUTTA, PENANG, SINGAPORE, and HONG-KONG.

THE PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY

BOOK PASSENGERS and RECEIVE GOODS and PARCELS for the ABOVE PORTS by their steamers—starting from Southampton on the 20th of every month; and from Suez on or about the 10th of the month.

75

BOMBAY.—Passengers for Bombay can proceed by this company's steamers of the 20th of the month, to Malta, thence to Alexandria by her Majesty's steamers, and from Suez by the Honourable East India Company's steamers.

MEDITERRANEAN.—MALTA—On the 20th and 29th of every month. CONSTANTINOPLE—On the 29th of the month. ALEXANDRIA—On the 20th of the month.

SPAIN AND PORTUGAL.—Vigo, Oporto, Lisbon, Cadiz, and Gibraltar, on the 7th 17th, and 27th of the month.

For plans of the vessels, rates of passage-money, and to secure passages, and ship cargo apply at the company's offices, No. 122, Leadenhall-street, London; and 57, High-street, Southampton.

NOTICE TO SHIPPERS OF GOODS AND PARCELS,

per PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY'S STEAMERS, to INDIA and CHINA.—GOODS and PARCELS sent direct to the company's parcel office, on or before 6 P.M., on the 17th of each month, are forwarded at less cost to shippers than when sent through any intermediate channel. Cases must not exceed 180 lbs. weight each, for Aden, Ceylon, Madras, Calcutta, and China; and 40 lbs. each case for Bombay. No package for India or China can, under any circumstances, be shipped at Southampton, unless it be cleared through the Custom-house, and placed alongside the steamer by noon on the 19th of each month.

76

Detailed particulars can be obtained on personal application, or by writing.

Parcel Department, 122, Leadenhall-street.

EMIGRATION FACILITATED.—Those persons who expect

their friends in AUSTRALIA to ASSIST them in their OUTFIT, might write to their friends there to pay the money into the hands of S. W. SILVER & CO.'S AGENTS in AUSTRALIA, or to their connections in the district, who would be named on application to S. W. SILVER & CO., in London. The agent's acknowledgment would be received by S. W. SILVER & CO., as CASH at the exchange of the day, for the OUTFIT. This proposal will be also communicated through the COLONIAL JOURNALS. EMIGRANTS' fitting-out warehouse at No. 4, Bishopsgate-street (opposite the London Tavern), where colonial information may be obtained, and small parcels received and forwarded to the colonies.

77

N.B.—CADETS to INDIA, and CABIN PASSENGERS generally to all parts of the globe (with experienced Female Managers in the Department for Ladies), fitted out as heretofore at 66 & 67, Cornhill, by S. W. SILVER & CO., OUTFITTERS, CLOTHIERS FOR HOME USE, and CONTRACTORS; and at St. George's-crescent, LIVERPOOL.

NEUBER'S IMPROVED LIQUID GLUE is Impervious to

DAMP or HEAT, without smell, and equal, if not superior, in strength to any other glue. It is used as a cement for IRON, WOOD, STONE, MARBLE, IVORY, GLASS, CHINA, and EARTHENWARE, PLASTER MODELS, for every description of FANCY WORK, and for household purposes.

78

It may be used at a moment's notice, and requires no preparation.

Price, dark, 8s.; pale, 10s. per gall.; and in bottles at 6d., 1s., and 1s. 6d.

Extracts from the Press.

We have tried it on a china dish, a wooden box, and a meerschaum pipe, with equal satisfactory results."—Vide *Builder*, December 30, 1848.

"It will not mix with water, is consequently impervious to moisture, and remains quite unaffected in damp situations."—Vide *Mining Journal*, December 9, 1848.

Wholesale agents—Low and Son, perfumers, 330, Strand; Gale, Baker, and Warde, druggists, Bouverie-street; Hopwood and Parke, Fish-street-hill, London.

N.B.—Respectable country agents required.

CAUTION.—"One of the most useful articles that can be pos-

sessed is Robinson's Patent Liquid Glue."—*Times.* From the acknowledged excellence of ROBINSON'S PATENT LIQUID GLUE, which may now be had in nearly every important town in the kingdom, has arisen numerous spurious imitations. Be particular to ask for Robinson's Patent Liquid Glue—none else is genuine. Neither time nor climate, hot nor cold fluids, affect it.—"It unites permanently severed glass, china, wood, cast-iron, stone, or marble."—*Douglas Jerrold's Weekly Newspaper.* "An extremely valuable addition to the store of domestic requisites."—*Atlas.*

79

In bottles, price 1s.—Depôt, No. 75, High Holborn, opposite the George and Blue Boar, London; may also be had of Wm. Hobdell, 2, Astey's-row, Lower-road, Islington.

DAMP AND GASEOUS EXHALATIONS.

SANATARY MEASURES.

All MEMBERS of BOARDS OF HEALTH are especially DIRECTED to the most EFFECTIVE MEANS which they can ADOPT to PREVENT the injurious and often FATAL EFFECTS upon the HEALTH of the COMMUNITY, arising from exhalations that are produced from moisture, decayed animal matter (as in grave-yards), stagnant water, and collections of foetid refuse, tending to produce a miasmatic state of atmosphere. In situations so effected, the impervious quality of the ASPHALTE of SEYSSEL renders it the most perfect PAVEMENT or COVERING that can be relied upon for hermetically closing, and thereby preventing the rising of moisture and escape of noxious vapours. The present extensive application of this material for covering roofs, terraces, and arches, for preveating the percolation of wet, is strong evidence of its effectiveness for the above purposes, which is further confirmed by the following extract from the Report of the Commissioners on the Fine Arts:—

"In 1839, I superintended the construction of a house of three stories on the Lac d'Enghein. The foundation of the building is constantly in water, about 19½ inches below the level of the ground floor. The entire horizontal surface of the external and interwal walls was covered at the level of the internal ground floor with a layer of SEYSSEL ASPHALTE,* less than half an inch thick, over which coarse sand was spread.

Since the above date, no trace of damp has shown itself round the walls of the lower story, which are for the most part painted in oil, of a grey stone colour. It is well known that the least moisture produces round spots, darker or lighter, on walls so painted. Yet the pavement of the floor, resting on the soil itself, is only about 2½ in. above the external surface of the soil, and only 19½ in., at the utmost, above that of the sheet of water.

The layer of Asphalte having been broken and removed, for the purpose of inserting the sills of two doors, spots indicating the presence of damp have been since remarked at the base of the door-posts."

80

* This method has been adopted at the new Houses of Parliament.

Seyssel Asphalte Company, Stangate, London. I. FARRELL, Secretary.

JAMES BOYDELL, LAND, MINE, AND MACHINERY

VALUER, AND AGENT,

No. 54, THREADNEEDLE-STREET, LONDON,

Has to DISPOSE OF a large quantity of STEEL and MANUFACTURED HARDWARE, now warehoused in London.

Several valuable PATENT RIGHTS, some of which have been profitably worked. 81

A FREESTONE QUARRY, in North Wales, from which, on account of its quality, the small cost of getting and working it, and its proximity to the sea, London may be supplied at lower prices than those now ruling for much inferior stone, and a large profit left to the proprietor.

An IRONSTONE MINE, likewise in North Wales, worked open east, close to a shipping port, and now in profitable work.

The LEASE of a very celebrated FOUNDRY and ENGINEERING ESTABLISHMENT, on the River Dee, complete, with fixtures, machinery and tools, in working order, and ready for any parties to embark at once on building first-class iron steam-vessels, and marine and locomotive engines.

The above will be found worthy the attention of any parties desiring to invest money in a profitable business, as they will be disposed of upon terms which will ensure an unusual return to the purchasers of them.

J. BOYDELL has also at his DISPOSAL a RESIDENCE and LANDED PROPERTY in SHROPSHIRE, which is in a good neighbourhood, and which (a large portion of the land adjoining the house being of a most picturesque character, and well timbered, with a streamlet running through it) might be made a country residence for any nobleman or gentleman, such as but few in the kingdom would bear comparison with.

Particulars of the above may be had, upon application, at 54, Threadneedle-street.

OAK FARM COAL AND IRON-WORKS, STAFFORDSHIRE.

IMPORTANT SALE.

In the matter of ALEXANDER MACNAUGHTANE PATERSON, JOHN WALKER, JAMES BOYDELL, and CHARLES BLANEY TREVOR ROPER, late of the Oak Farm Works, in the parish of KINSWINFORD, in the county of STAFFORD, ironfounders, ironmasters, and edge tool manufacturers, dealers and chapmen, and co-partners, against whom a FIAT IN BANKRUPTCY, dated the 11th day of February, 1848, hath been issued.

TO BE PEREMPTORILY SOLD 82

(Pursuant to an order of the Right Honourable Sir James Lewis Knight Bruce, Knight, one of the Vice-Chancellors acting in bankruptcy, dated the 25th day of March, 1848, and made on the petition of Sir Stephen Richard Glynne, Bart., and others, and, also pursuant to an order of John Balguy, Esq., Q.C., the commissioner acting in the prosecution of the above-mentioned fiat, made the 31st day of September, 1849, by virtue or under the authority of the last-mentioned order)

BY AUCTION, BY MESSRS. OATES AND PERRENS,

AT DEE'S ROYAL HOTEL, BIRMINGHAM, in the county of WARWICK, on Tuesday, the 5th day of April next, between the hours of one and eight o'clock in the afternoon, in one or more lot or lots, as may be agreed on at the time of sale, and subject to conditions then to be produced. All those very extensive and celebrated COAL, IRON, and STEEL WORKS, BLAST FURNACES, MILLS, FORGES, DWELLING HOUSES, LANDS and premises, with the valuable MINES of COAL, IRON-STONE, FIRE BRICK, and SURFACE CLAY, and all other the MINES and MINERALS remaining ungotten in and under the same, situate in the several parishes of Kingswinford, Himley, and Sedgley, in the county of Stafford, and late in the occupation of the Oak Farm Company, well known as the

OAK FARM COAL AND IRON WORKS,

Comprising the COLLIERY, BLAST FURNACES, and MALLEABLE IRON WORKS, with the buildings, shops, offices, workmen's dwelling-houses, and appurtenances thereto respectively belonging, together with the fixed plant and machinery, &c., as hereunder described.

The MINERAL ESTATE comprises the colliery and site of the works, containing about 103 acres (more or less) of which admeasurement the following portions of the mines and minerals hitherto worked now remain ungotten, namely:—

Of the thick or ten yard coal about	24 acres.
Of the brooch coal about	55 ,,
Of the heathen coal, and the gubbin ironstone about	55 ,,
Of the white ironstone about	41 ,,
Of the fire clay and the new mine coal about	81 ,,

Together with the ribs and pillars of thick coal in and under about 35 acres of the same estate.

Also the MINES and MINERALS in and under two other detached fields, containing together about 18 acres, near to the above, the whole of the mines under which remain ungotten.

These fields contain, in addition, a valuable mine of foundry sand, from which the works have been supplied.

To the Mines and Minerals as above, 18 pit-shafts have been sunk, with the workings, gate-roads, headings, engine-pits, drifts, &c., complete.

The IRON-WORKS consist of two blast-furnaces, with superior blowing engine, 60-horse power, in brick engine-house, boilers, blowing apparatus, pipes, &c., complete to the tuyeres, and water balance left to raise the materials, large casting-house and foundries bridge-house, &c., refining and blast-pipes to ditto, and brick-built stoves to foundry.

The MILLS and FORGES have several plants and machinery, arranged as follows:—

Mill-engine of 80-horse power, in brick engine-house, with three boilers and seating, flues and chimney-stack.

Main machinery, timber frames, cast-iron shafts, wheels, and carriages, comprising the motive-power from the engine to all the roll-trains and shafts to the shears, turning-lathe and rail-saw, and terminating at the point of connection—namely, where the motion to each part is disengaged, or connected, for working the fast or fixed crab.

Nos. 1 and 2 forges, condensing-engine, of 50-horse power, in brick engine-house, and stacks, with one boiler, seating, flues, &c.

Main machinery, frames, shafts, wheels, and carriages, all as above described, and to the point above limited in the mill, two hammers, with cam rings, &c., complete.

The above mill and forge-works are enclosed, and covered with spacious roofs, supported by cast-iron pillars and brick walls.

No. 3 FORGE (worked by portable engine), main machinery, frames, shafts, wheels, and carriages, all as before named and limited, complete to the fast crabs of the sheet-rolls, and the guide roll-train, iron helve, forge with cam ring, &c., complete. Three firing boilers, with seating and flues, and large chimney-stack to ditto.

STEEL-WORKS, consisting of two furnaces, casting-house, shops, and warehouses.

FIRE BRICK and CEMENT CLAY WORKS.—Steam engine of thirty-horse power, in brick engine house, with two boilers, seating, flues, &c. Fly wheel and machinery for grinding, lifting, and tempering clay, with extensive buildings for the same, namely, six large drying stoves with floors; flues and fire grates, and six kilns to ditto, with furnace, offices, sheds, &c.

The whole of the Fire-Clay Works are now occupied by Messrs. Chance, and Co., and will be sold subject to the terms of the agreement or arrangement under which they now hold the same.

Also four red brick kilns, with valuable mine of surface or red brick clay.

GAS WORKS.—Brick retort house, with flues and chimney stack, and brickwork to gasometer tank, &c., exclusive of the metallic part.

Brick built smiths' and fitting shops, store houses, and foundries, and also millwrights', pattern makers', and engineers' shops, buildings, &c.

Engine shed and store room, lathe house, boiler shops, and tube mill, and a number of shops for various manufacturing purposes.

Adjoining the works are large and commodious offices, with dwelling house, stable, and outbuildings attached.

Canal basin and two large warehouses, with boat loading slips in each, on the Stourbridge Extension Canal.

Basin wharf and railroad in the occupation of Mr. B. Gibbons, under an agreement for lease for 21 years, from the 1st of December, 1845, and will be sold subject to such agreement, and the other terms on which Mr. Gibbons holds the same.

N.B. Mr. Gibbons holds some spare land, formerly spoil, adjoining his wharf, under a verbal agreement as tenant from year to year.

Also thirty-nine WORKMEN'S TENEMENTS or DWELLING-HOUSES, with gardens and appurtenances thereto belonging, near to the works.

Also all that substantial DWELLING-HOUSE, with stabling, outbuildings, and appurtenances thereto belonging, now in the occupation of Mr. John Griffiths.

Also all that conveniently situated and commodious DWELLING-HOUSE, now used as a public-house, with the garden, stabling, outbuildings, and appurtenances, and water corn mill, now in the occupation of Mr. John Cartwright.

The whole of the above extensive works and premises are held under lease from Sir Stephen Richard Glynne, Bart., for 31 years, from the 26th day of December, 1835, whereof 18 years are now unexpired, together with the benefit of any extension thereof which there may be an understanding with the landlord to grant (if any such exists), and will be sold subject to the rents and royalties by the said lease reserved, and the covenants therein contained; and also subject to a mortgage of the said premises to George Talbot, Esq., of Green Hill, near Kidderminster, for 30,000*l.*

The Oxford, Worcester, and Wolverhampton Railway Company have a branch to the above works.

A copy of the working plans of the minerals, made by the mine agent, employed at the works, and a copy of the lease, and also of the terms under which Messrs. Chance and Co. work the fire clay mines, and of Mr. Gibbons's agreement for the wharf and railroad, may be inspected, and further particulars obtained at the offices of Messrs. Collis, Clowes, and Uhthoff, solicitors, Stourbridge; at R. Valpy's Esq., official assignee, Waterloo-street, Birmingham; of Mr. Griffiths, at the Oak Farm Works; and at Messrs. Freshfield, solicitors, New Bank Buildings, London; and on and after the 1st of March next, particulars, with the lithographed plans annexed, may be obtained as above; and at the following places—viz.: at the offices of Messrs. Clowes, Wedlake, and Selwyn, solicitors, 10, King's Bench-walk, Inner Temple, London; Messrs. Motteram, Knight, and Emmett, solicitors, Bennett's-hill, Birmingham; William Talbot, Esq., solicitor, Kidderminster; and of the auctioneer, Stourbridge; and at the offices of the following newspapers—viz.: The *Midland Counties Herald*, Birmingham; the *Liverpool Mercury, Worcestershire Chronicle, Staffordshire Advertiser, Wolverhampton Chronicle, Mining Journal*, and the principal inns in the neighbourhood.

February, 1849. COLLIS, CLOWES, and UHTHOFF, Solicitors, Stourbridge.

IMPROVED LIFTING JACKS,

MANUFACTURED BY

W. AND J. GALLOWAY,

PATENT RIVET WORKS,

MANCHESTER.

IMPROVED RATCHET JACK.

HALEY'S PATENT LIFTING JACK.

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**** The attention of parties who employ

Lifting Jacks,

is respectfully requested to the superiority of those annexed, over those hitherto in use.

London: Printed by RICHARD MIDDLETON, and published by HENRY ENGLISH (the proprietors), at their offices, No. 26, FLEET-STREET, where all communications are requested to be addressed. [*February* 24, 1849.